

City of Sutter Creek

Energy Action Plan

PUBLIC REVIEW DRAFT

Produced by Sierra Business Council

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In Collaboration with City of Sutter Creek

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EXECUTIVE SUMMARY

The City of Sutter Creek Energy Action Plan (EAP) is a roadmap for expanding energy-efficiency, water-efficiency and renewable-energy efforts already underway in the City. It builds upon efforts begun in 1994 with the General Plan and work conducted by Sierra Business Council (SBC) in 2010 and 2011. The document focuses on three energy use sectors within the community – residential, non-residential, and municipal (which is a subset of non-residential). The report only evaluates energy consumed by buildings and municipal operations; other energy consuming sectors such as transportation are not addressed but could be at a future date. The City of Sutter Creek owns and operates a full vehicle fleet, City government buildings and facilities including the wastewater facilities, City Hall, Community Building, the Old Monteverde Store, Visitor Center and streetlights. The goal of the plan is to reduce electricity use in 2020 by 19% (from the business-as-usual forecast) and natural gas use by 5%. This translates to annual savings in 2020 of 3.97 million kilowatt hours (kWhs) of electricity and 37,000 therms of natural gas.

The primary energy sources consumed by the three community sectors are electricity and natural gas, which is distributed by Pacific Gas and Electric Company (PG&E). Additionally, there is potentially significant other non-utility fuel use in Sutter Creek which is not analyzed due to data limitations. According to the baseline inventory conducted for Year 2005 the Sutter Creek community consumed 18.7 million kWhs of electricity and an estimated 679,000 therms of Natural gas. The City's municipal operations accounted for nearly 299,000 kWhs of electricity consumption and 4,000 therms of natural gas in 2005, costing the City \$61,000. The forecast for Year 2020 shows a 7% increase in residential energy consumption and a 22% increase in non-residential energy consumption if no energy efficiency actions are taken. To date, energy efficiency efforts within the City are saving over 1 million kWhs of electricity and 6,000 therms of natural gas annually, which underscores the importance of having such measures.¹ The inventory and forecast work conducted by SBC identifies additional areas where significant opportunities exist for additional energy savings. The EAP specifies the actions needed to achieve those savings resulting in further reductions in energy consumption and increased energy savings for residents, businesses, and local governments.

The document is organized into five chapters; the 'heart' of the document is contained in Chapters 4 and 5 (Energy Efficiency Goals, Strategies and Actions, and Implementation). The goals address five key areas:

- Energy efficiency in existing structures
- Energy performance in new construction
- Expansion of renewable energy options
- Energy efficiency in municipal operations
- Reduction in water waste which reduces energy needed to transport and treat water

¹ Sutter Creek residential and non-residential energy savings based on projects completed 2005-2013. (PG&E)

The strategies focus on voluntary measures that can be taken by residents, businesses, and the local government. Key components include developing and disseminating information on existing rebate and incentive programs; public outreach via the City's website and printed materials; training for staff, contractors, realtors and developers; and partnerships with PG&E as well as local and regional organizations. Energy reduction performance indicators and targets are established for each group of strategies. If all the actions are implemented, the EAP would reduce electricity use in 2020 by 19% and natural gas use by 5%. This translates to annual savings in 2020 of 3.97 million kWhs of electricity and 37,000 therms of natural gas. The estimated energy and cost savings for each strategy area would be as follows:

Table ES-1: Summary of Potential 2020 Annual Energy and Cost Savings

Strategy Area		2020 Annual Energy Savings		2020 Annual Cost Savings	
		kWh	therms	Electricity ²	Natural Gas ³
Energy Efficiency	Existing Structures	1,691,550	24,014	\$428,977	\$84,049
	New Construction	322,132	8,580	\$81,693	\$30,029
Renewable Energy	Existing Structures	1,749,083	-	\$443,567	-
	New Construction	113,826	4,034	\$28,866	\$14,119
Municipal Operations	Existing Structures	59,771	808	\$15,158	\$2,829
Water Efficiency	Existing Structures	31,408	-	\$7,965	-
Total		3,967,770	37,436	\$1,006,226	\$131,026

The following table compares 2005 Baseline energy usage, 2020 Business as Usual (BAU) usage and potential energy use savings in 2020 with the Energy Action Plan (EAP). The majority of energy savings, 3.5 million kWhs and 24,800 therms of natural gas, are attributed to existing structures and would have significant impact in the community regardless of the forecasted new construction.

Table ES-2: Comparison of Baseline and Forecasted Annual Energy Use with and without the EAP

Energy Use	2005 Baseline	2020 BAU without the EAP	2020 with the EAP	Percent Difference
Electricity	18,672,460 kWh	21,345,430 kWh	17,377,660 kWh (-3,967,770 kWh)	19% reduction from 2020 BAU
Natural Gas	678,798 therms	755,540 therms	718,104 therms (-37,436 therms)	5% reduction from 2020 BAU

²Assumed average rate of \$0.2536 per kWh based on Forecast of PG&E Rates.

<http://www.ci.healdsburg.ca.us/Modules/ShowDocument.aspx?documentid=8906>

³ Assumed average rate of \$3.5 per therm based on extrapolation from PG&E 2015 natural gas forecast.

<http://www.pge.com/tariffs/rateinfo.shtml>

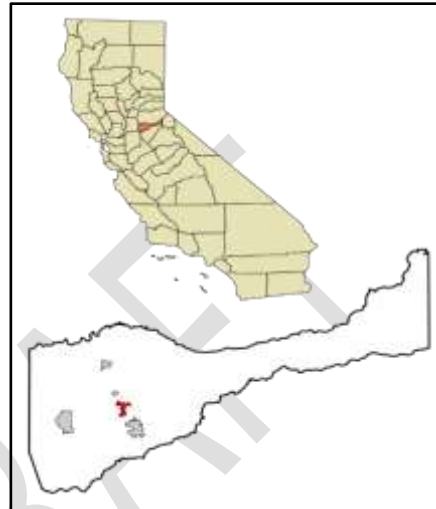
Purpose of the Energy Action Plan

The EAP can be used by local residents and business owners to see where they might achieve greater energy efficiency, water efficiency or utilize renewable energy in their homes or commercial buildings. The City can use it to guide decisions about how to make its buildings and operational infrastructure more efficient. It can also be used by City staff to prioritize programs to inform, encourage, and inspire residents and business owners to increase energy efficiency, water efficiency and renewable energy use in Sutter Creek. Exploring and implementing the actions in the EAP creates flexibility for the City in meeting its energy and water needs. This in turn helps the community become more self-sufficient and economically resilient in light of potential increases in energy prices, whether due to market conditions or the regulatory environment, as well as current drought conditions. Being energy efficient enhances the City's ability to respond to the ever changing external conditions related to energy supply and demand.

CHAPTER 1: BACKGROUND

Community Profile

Sutter Creek was named after John Sutter and is known as the ‘Jewel of the Mother Lode.’ Located in western Amador County, in the renowned wine region of Shenandoah Valley, the City covers approximately 2.6 square miles and is accessed by historic state route 49. In 1854 it became a town and mecca for those seeking their fortune in gold. Today it is a registered California Historical Landmark (#322) and a lively tourist town with many shops and restaurants. Per the 2010 Census the City was home to 2,502 residents and 1,168 housing units with an average household size of 2.14 persons. Estimated 2014 population is 2,442 persons⁴ which indicates a slight decline from 2010. In 2014, the City had 16 full-time, 5 contract and 13 summer, part-time employees and an operating budget of \$3.2 million.



http://en.wikipedia.org/wiki/Sutter_Creek,_California

The City owns and operates a wastewater treatment facility, streetlights, park and other public lighting as well as general municipal buildings and facilities. Electricity and natural gas for the community is distributed by Pacific Gas and Electric Company (PG&E). Propane used for residential heating is provided by various suppliers in the area.

The climate in Sutter Creek reflects its location in the Sierra Nevada foothills. Average temperatures range from summer highs in the high 90's (degrees Fahrenheit) to winter lows in the mid 30's. Typically, average annual precipitation in Sutter Creek is about 30 inches; in 2014 total precipitation was 20.51 inches.

Local Energy Efficiency Efforts

Sutter Creek has already implemented programs that have or will lead to ancillary benefits in the form of energy conservation and greenhouse gas mitigation. Sutter Creek initiatives toward meeting resource and energy efficiency goals include the following:

The City's General Plan (current as of this writing) has several specific goals, policies, and/or measures that promote energy efficiency:

- **Convert non-metered water service to metered service to better monitor water usage (General Plan recommendation, p.CO-6)**

⁴ Source: State of California, Department of Finance, E-4 Population Estimates for Cities, Counties, and the State, 2011-2014, with 2010 Census Benchmark. Sacramento, California, May 2013.
<http://www.dof.ca.gov/research/demographic/reports/estimates/e-4/2011-20/view.php>

- All water connections in the City should be metered (Policy 3.7, p.CO-19)
- Use native drought tolerant plants for landscaping (Policy 3.8, p.CO-19)
- Incorporate solar access easements in new developments (Policy 3.23, p. CO-23)

The City's 2014-2019 Joint Housing Element update has several specific policies and programs that promote energy efficiency:

- Sutter Creek shall promote energy and water conservation designs and features in residential developments (Policy H-3.2)
- Sutter Creek will enforce the State of California's Title 24 energy requirements. (Program H-3.2)
- Sutter Creek shall consider working...with local utility companies to implement energy awareness programs. (Policy H-3.3)
- Sutter Creek shall continue to support PG&E's weatherization program ... (Program H-3.3.)
- Sutter Creek will consider partnering with ... PG&E to promote energy saving programs...and with CARE, REACH and FERA. (Program H-3.4)

Other Measures:

- Pacific Gas & Electric Company upgraded City-owned streetlights to energy efficient lighting

CHAPTER 2: INTRODUCTION

This chapter discusses the purpose and scope for the Sutter Creek Energy Action Plan (EAP), the regulatory context for energy efficiency planning, how the EAP was developed, and provides a user's guide to the document.

WHY PREPARE AN ENERGY ACTION PLAN?



Local economies in the Sierra Nevada rely heavily on natural resources for tourism, recreation, forestry, agriculture and other industries. Changes in weather patterns resulting in less precipitation and significantly warmer temperatures have the potential to adversely affect the vitality of the region's natural resources, which in turn directly impacts local business. Reducing a community's demand on the energy grid helps lighten the need for new energy generating plants and creates

the flexibility for the community to more readily meet its energy needs with locally produced renewable energy. Retrofitting homes and businesses to be more efficient creates local jobs, reduces energy costs, improves air quality, and in combination with increased opportunities for walking and bicycling, improves community members' health. In addition, money not spent on energy can instead be spent at local businesses, improving the local economy.

The Sutter Creek EAP outlines a series of strategies to reduce energy consumption in residential and non-residential buildings as well as municipal facilities and operations. This report is intended to provide guidance to City staff, demonstrate the City's commitment to energy efficiency and inspire residents and businesses to participate in community efforts to maximize energy efficiency and reduce the associated air quality impacts of fossil fuel based electricity.

Climate Science Basics

Naturally occurring gases dispersed in the atmosphere determine the Earth's climate by trapping solar radiation. This phenomenon is known as the greenhouse effect, which is a natural process that perpetuates life on earth by keeping the planet's surface warm. Scientific observation indicates that average air and ocean temperatures have steadily increased globally over the last 100 years. Evidence of this includes rapid levels of glacial melt, reductions in sea

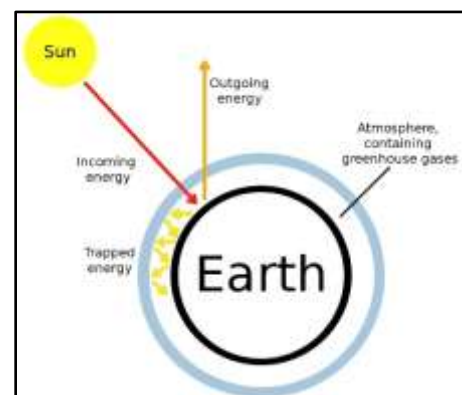


Image Credit: simpleclimate.wordpress.com

ice, shorter freezing seasons and decreases in snowpack.

Scientific studies suggest that human activities are accelerating the concentration of greenhouse gases (GHG), which affects the global climate. The most significant contributor is the burning of fossil fuels for transportation and electricity generation, which introduces large amounts of carbon dioxide and other GHGs into the atmosphere. Collectively, these gases intensify the natural greenhouse effect, causing global average surface temperatures to rise.

Local Climate Change Impacts

The City of Sutter Creek, like all foothill communities in the Sierra Nevada, faces challenges associated with climate change in the region. Increased frequency and altered timing of flooding will increase risks to agriculture, people, ecosystems and infrastructure. Potential impacts on water resources include reduced mountain snowpack, delayed snow accumulation, earlier snow melting and ultimately shortages in runoff and water supply. Extended droughts may increase wildland fire risk. Since local economies in the area rely heavily on these resources for agriculture, tourism, recreation and other industries, climate change may negatively affect economic activity in Sutter Creek, and ultimately impact quality of life for community members.

Regulatory Context

California is a leader in developing policies to reduce GHG emissions, and these policies are some of the drivers behind the completion of GHG inventories and energy efficiency planning at the local level. The state's key efforts are described on the following page.

1978	<ul style="list-style-type: none"> • Title 24, Part 6. Energy Efficiency Standards first adopted in 1978. Ongoing updates. Established minimum energy efficiency performance standards for residential and nonresidential buildings. Effective July 2014 new energy efficiency standards cost-effectively increase efficiency by 20% for residential buildings and 25% for non-residential buildings.
2002	<ul style="list-style-type: none"> • Senate Bill 1078. Established Renewable Portfolio Standards for each of the state's investor-owned utilities (IOUs), electric service providers, and community choice aggregators to acquire 20% of their electricity from renewable resources by 2010 and 33% by 2020.
2005	<ul style="list-style-type: none"> • Executive Order S-3-05. Governor's Executive Order. Set GHG reduction targets for state agencies at Year 2000 levels by 2010, 1990 levels by 2020 and 80% below 1990 levels by 2050.
2006	<ul style="list-style-type: none"> • Assembly Bill 32. Landmark legislation that requires the California Air Resources Board (ARB) to develop regulatory and market mechanisms that will reduce greenhouse gas emissions to 1990 levels by 2020.
2007	<ul style="list-style-type: none"> • Senate Bill 97. Requires lead agencies to analyze GHG emissions and climate change impacts under the California Environmental Quality Act.
2008	<ul style="list-style-type: none"> • Senate Bill 375. Requires the California Air Resources Board to establish GHG reduction targets for each Metropolitan Planning Organization (MPO) in California and directs each MPO to develop a Sustainable Communities Strategy.
2011	<ul style="list-style-type: none"> • CALGreen. Enhances sustainable construction practices through mandatory and voluntary measures including reduced construction waste, water conservation, non-toxic sealants and use of renewable materials. Now part of Title 24 and updated on same schedule.

Economic Opportunities

One of the potential outcomes of implementing the Sutter Creek EAP is increased investment in local green businesses and technologies which could provide new economic development opportunities for the City. The following indicators suggest a robust market for clean economy businesses and industries as we move forward to the next decade. New clean economy jobs and business opportunities range from water efficiency and recycling to energy and battery technologies as well as the transformation of existing industries. All of this creates new economic opportunities for communities within the Sierra Nevada region.

- California has more patent registrations in clean technology than any other state.
- California leads the nation in energy storage systems development and innovation.
- Jobs within California's Core Clean Economy increased by 20% in the last decade (January 2002 to 2012) while the total state economy increased 2%.

- Within California's Core Clean Economy, the service sector ranked highest (57%) followed by manufacturing (13%), installation (11%), supplier (10%) and research and development (7%).
- California's clean manufacturing jobs over the last decade were up 53%, while total state economy manufacturing fell by 21%.

Relationship to CEQA

The City of Sutter Creek determined the EAP was categorically exempt from the California Environmental Quality Act (CEQA) per section 15061 (b) (3) of the CEQA guidelines:

The activity is covered by the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA.

Information in the document (and related background reports) can be used in environmental assessments required for new development projects, thus expediting the project review process.

ENERGY ACTION PLAN DEVELOPMENT

Process

The path to the EAP began in 2010 when the City engaged Sierra Business Council (SBC) to conduct a GHG inventory of municipal facilities and then subsequently, in 2011, to conduct a GHG inventory for the community, including residential and non-residential sectors. Energy consumption data was gathered for baseline year 2005 (which is the recommended year due to data availability). Calculations were performed to estimate baseline emissions (based on Year 2005 energy consumption data) using the most current methodology and protocols at the time. The baseline inventories were presented to the City Council in March 2011 and March 2012.

In 2014, the City decided to take the information gathered through the baseline inventory process and formulate energy strategies that would assist the community in being more energy efficient now and in the future.

In 2015, the baseline inventory data was forecasted out to 2020 using local and regional growth projections. The data gathered during the inventory and forecasting process helped identify those activities within the community that consumed the most energy (and correspondingly had the highest GHG emissions). This information pointed the way to where the greatest energy efficiencies could be realized, resulting in a series of goals, strategies and actions the City can undertake to reduce energy consumption as well as dollars spent on energy. Performance indicators and targets were identified, where appropriate, to be used by the City to measure its progress toward achieving greater energy efficiency.

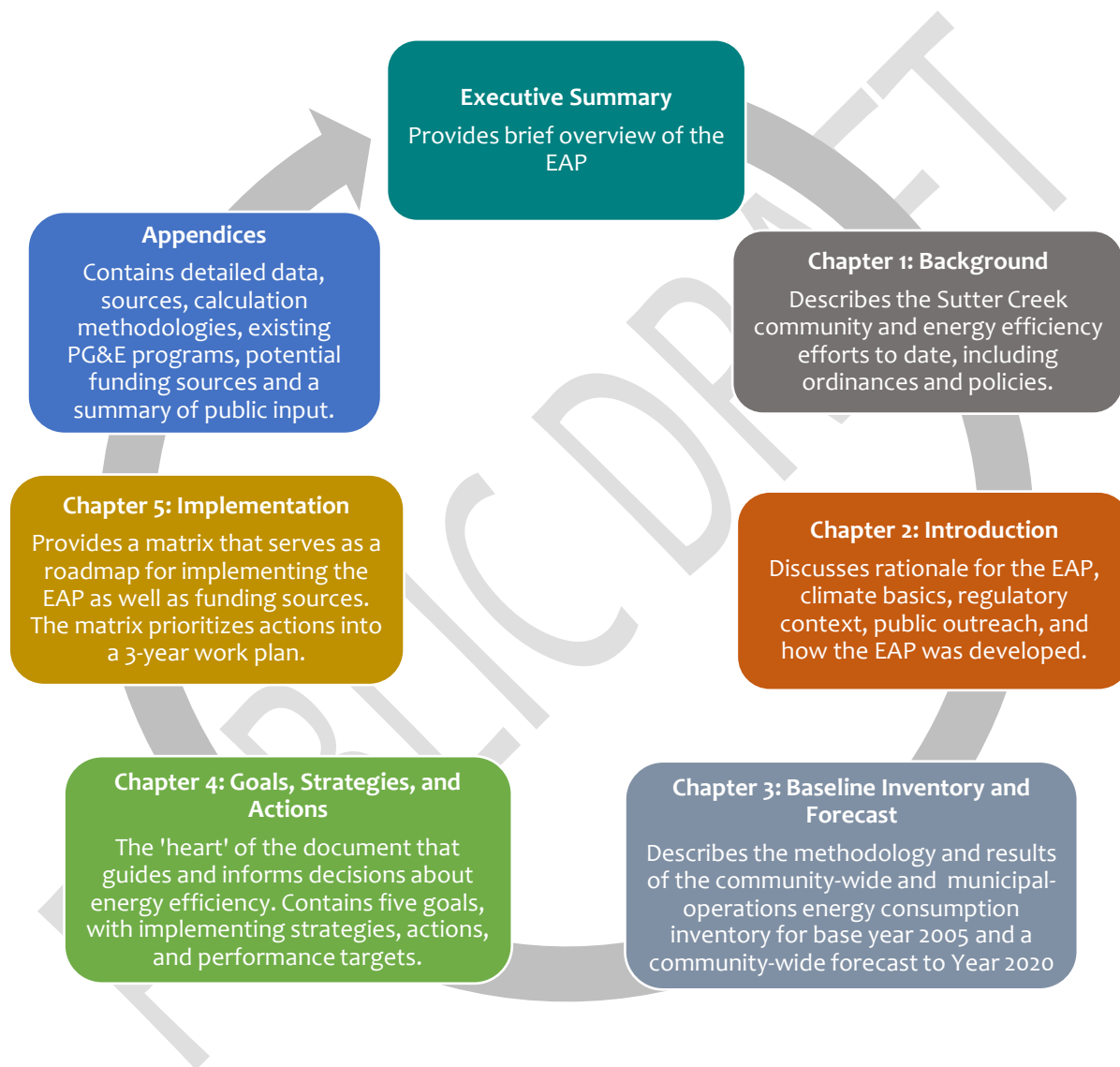
Public Outreach

As with any local planning process, community involvement is an essential part of its success. For the EAP, input was widely sought within the City to help shape its content and ensure the document is relevant and realistic. The public outreach strategy included an online survey, information on the City's website, one community study session hosted by the Sutter Creek Planning Commission (June 22, 2015), meeting notices in local newspapers, targeted outreach to local businesses and organizations, and duly noticed public meetings before the Planning Commission and City Council on [REDACTED] and [REDACTED] respectively.

USERS GUIDE TO THE REPORT

The EAP can be used as a tool to guide municipal and community decisions about the best ways to improve energy efficiency in the home, business, and municipal facilities and operations. It is designed as an integrated 'living' document that can be modified and augmented as new information, programs and energy efficiency technologies become available. The following diagram describes the information contained in the five chapters and appendices of the EAP. It provides a roadmap to assist the reader in accessing relevant information on existing and future energy consumption, policy direction, implementation actions, performance targets and a work plan for implementing the EAP.

**Figure 2-1: Energy Action Plan
Content and Organization**



CHAPTER 3: BASELINE INVENTORY AND FORECAST

This chapter summarizes the 2005 baseline and 2020 forecast of community-wide energy consumption as well as the 2005 baseline of municipal-operations energy consumption. SBC previously worked with Sutter Creek to conduct a 2005 baseline GHG emissions inventory of the City's municipal-operations and community-wide activities and sources. This work was conducted in 2010-2012, with support from PG&E. The baseline and forecasted energy consumption informed the strategies for reducing energy consumption and increasing energy efficiency discussed in Chapter 4. It also provides a baseline year against which future progress can be measured.

2005 Baseline Community-Wide Inventory

The City's community-wide energy consumption data is expressed as aggregated residential and non-residential energy consumption by energy source. The City's municipal energy use is included with the aggregated community-wide energy usage. Electricity and natural gas consumption were the largest energy sources in the Sutter Creek built environment. There are also a small number of homes in Sutter Creek that use propane, fuel oil or wood as a heating source. This energy use was not included.

2020 Business-as-Usual Community-Wide Forecast

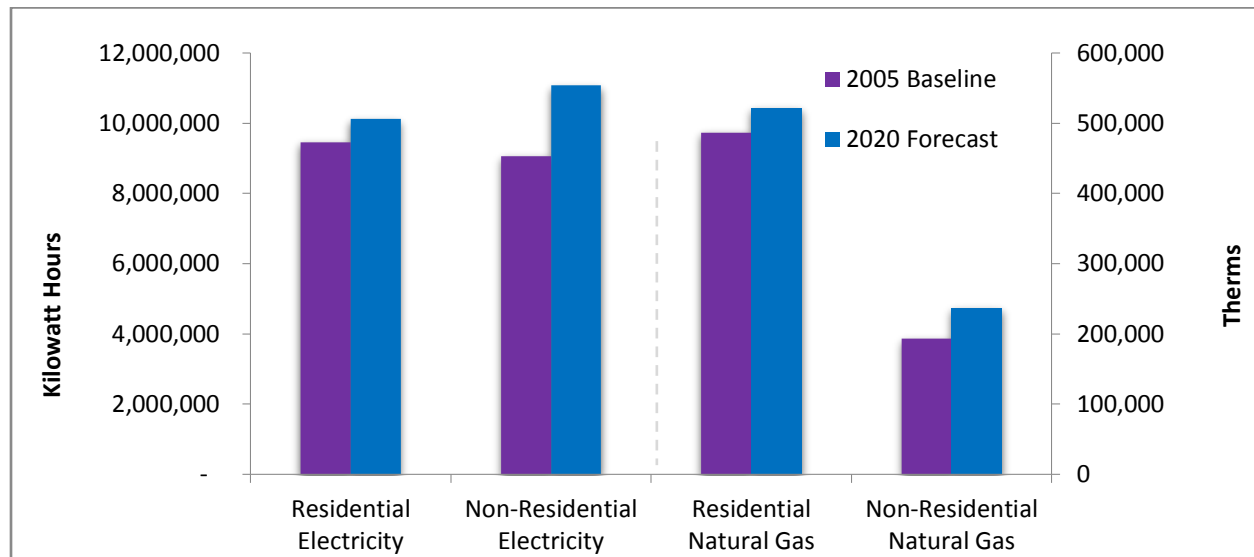
The City's community-wide residential and non-residential energy usage was forecasted out to 2020 under a business-as-usual (BAU) scenario, presented in Figure 3.1. Since the City's municipal energy use is included with the community-wide energy usage, a separate forecast for municipal energy was not completed. The BAU forecast scenario was completed using the Statewide Energy Efficiency Collaborative (SEEC) ClearPath California toolkit. The BAU forecast estimates how energy use would change from 2005 to 2020 in the absence of any energy efficiency or renewable energy policies or programs. The two required inputs for a forecast - baseline energy consumption data and growth rates - are presented in Appendices A and B, respectively. The baseline data was collected from the 2005 community-wide GHG emissions inventory prepared by SBC. The growth rates were calculated using local projections of housing units and non-residential new construction for Sutter Creek prepared for the Amador County Regional Transportation Plan.

The City's residential energy use was forecasted to increase 7% by 2020 using the projected change in housing units in Sutter Creek. The annualized growth rates for housing units in the City were calculated based on the number of housing units from 2005 reported by the California Department of Finance for Sutter Creek and the projected growth in housing units from 2013 to 2025 based on the Amador County Transportation Commission UPlan projections developed for the Regional Transportation Plan.

The City's non-residential energy use was forecasted to increase 22% by 2020 using projected non-residential new construction augmented by the City's building permit data. The annualized growth rates for non-residential new construction in Sutter Creek were calculated based on the actual change in non-residential square footage from Sutter Creek permit data from 2005 to 2013 and the projected change in non-residential square footage in Sutter Creek from 2013 to 2035 based on the

Amador County Transportation Commission UPlan projections developed for the Regional Transportation Plan.

Figure 3-1: Baseline and BAU Forecast of Residential and Non-Residential Electricity and Natural Gas Use



2005 Baseline Municipal Operations Inventory

The City of Sutter Creek's municipal facilities energy use, presented in Figure 3.2 and 3.3, is primarily electricity and natural gas usage, with public lighting and the wastewater facilities consuming the most energy. Significant electricity was also consumed by the City Hall. The City's electricity consumption of 299,000 kWh including transmission and distribution losses and natural gas consumption of 4,000 therms is less than 2% of the community's total electricity consumption and less than 1% of natural gas consumption respectively. While the City has undertaken efforts to improve energy efficiency, there are still significant opportunities for the City to reduce electricity and natural gas usage while saving money as well. In 2005, the City spent over \$56,000 on electricity and \$5,000 on natural gas for municipally owned and operated buildings. Detailed energy use is presented in Appendix A.

Figure 3-2: 2005 Baseline Municipal Facilities Electricity Consumption (kWh)

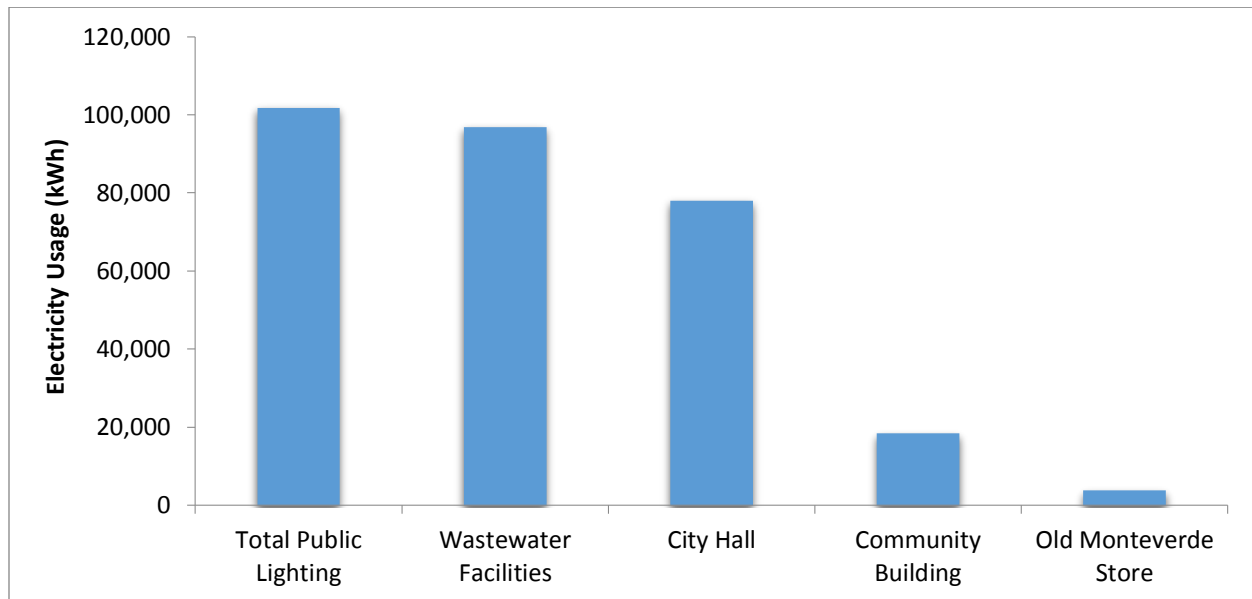


Figure 3-3: 2005 Baseline Municipal Facilities Natural Gas Consumption (therms)



CHAPTER 4: GOALS, STRATEGIES, AND ACTIONS

This chapter identifies goals, strategies and actions Sutter Creek can undertake to reduce municipal and community energy consumption, energy-related costs and energy-related GHG emissions in both the near and far term. The goals, strategies and actions pertain to the energy consumed by buildings and facilities in the residential, non-residential and municipal sectors. Other sectors, such as transportation and solid waste, are not included in this report but could be addressed in future studies. Agricultural energy usage is not addressed directly, though water efficiency related to agriculture (outdoor water use) is captured in Goal 5.

The baseline and forecast data indicate that without a plan to reduce energy consumption, the community's energy use and the associated costs will continue to increase over time. The community's residential electricity and natural gas use is forecasted to increase by 7% by 2020 and the community's non-residential electricity and natural gas use is forecasted to increase by 22% by 2020. The continued increase in non-renewable energy consumption translates to more dollars spent on energy and additional air quality impacts within the region.

DEFINITION OF KEY TERMS

Key terms used in this report are defined below to assist in understanding the purpose of each and the interconnection between them. Definitions for some non-key terms are footnoted throughout the report at the bottom of the relevant page.

Goal

An expression of a desired outcome, an ideal future result or condition, based on community priorities and vision. Goals are not quantifiable or time-dependent but rather represent the end state.

For example: To improve public safety.

Strategy

An intermediate step between a goal and an action. Strategies define specific pathways that, if followed, will help achieve the goal.

For example: Improve lighting conditions in public spaces.

Action

Individual activities the jurisdiction will undertake to implement an energy-efficiency strategy. A strategy can have several actions.

For example: Review existing lighting conditions and install new light fixtures where required.

Performance Indicator

A quantifiable measure that is used to gauge performance in meeting identified actions.

For example: Percentage of public space reviewed for safe lighting conditions.

Target

The numerical result that demonstrates achievement of a strategy.

For example: Fifty percent (50%) of public spaces reviewed by 2020.

BASIS FOR ENERGY GOALS AND STRATEGIES

To identify the most appropriate energy-efficiency strategies for the City the following documents/resources were reviewed:

- 2005 Government-Operations Greenhouse Gas Emissions Inventory (prepared by SBC in 2010 – 2011)
- 2005 Community-Wide Greenhouse Gas Emissions Inventory (prepared by SBC in 2011 – 2012)
- Sutter Creek General Plan (1994)
- Sutter Creek 2014-2019 Joint Housing Element (2015)
- Sutter Creek Municipal Code (as updated December 2012)
- Draft Sutter Creek Design Standards (November 3, 2014)
- Review of measures underway/in place in Sutter Creek
- Review of measures in other similar jurisdictions
- Meetings/consultation with City staff
- Public input received from community members

There are a myriad of measures and practices to reduce energy consumption and emissions. Selection of those most appropriate for Sutter Creek was based on the criteria below and in consultation with City staff:

- Potential of actions to reduce energy use
- Estimated cost to City to implement actions
- Estimated costs and savings for residents / business owners
- Availability of staff resources or other partner organizations to implement
- Availability of potential funding to assist with implementation
- Benefits to the community in addition to energy savings (e.g. cost savings, air-quality improvement)

ENERGY REDUCTION POTENTIAL

The energy reduction potential was calculated for applicable measures using data collected in the baseline municipal and community-wide GHG inventories and the energy use forecasts combined with the estimated energy savings associated with completion of the applicable 2020 targets. The annual energy reduction potential was calculated using top-down methods⁵ to estimate energy

⁵ An approach that begins with community-wide energy use, breaks it down into smaller sub-sectors (residential, non-residential, and municipal) and then applies reduction estimates based on the targets.

savings achieved in 2020 by meeting the associated 2020 targets. Calculations are documented in Appendix C.

ENERGY COSTS AND SAVINGS

For the City, the economic implications of implementing the energy-efficiency and energy-reduction measures primarily involve costs associated with staff time and potential costs associated with retaining outside consultants to assist with program implementation. Using the City's 2014-2015 adopted budget, an estimate was made of low, medium and high cost ranges that could be incurred by the City to implement the action measures in the report. The potential cost savings realized from implementation of some of the measures were not factored into this range, given the uncertainty of program design details and how they would exactly be carried out. The purpose of the cost range is to provide a relative measurement for fiscal impact to the City that will assist in prioritizing the measures for implementation. For Sutter Creek, the following cost ranges are used in this report:

Cost to City (annual)	Low: 0-\$2,600
	Medium: \$2,601 – \$5,200
	High: \$5,201+

For residents and businesses, some reduction measures do not result in any notable private costs or savings. However, wherever possible, analysis and quantification was framed in terms of annual costs/savings (or average annual costs/savings). While there are funding sources and financing mechanisms available to offset private costs, calculations were based on a hypothetical average and did not include potential offsets. Almost all measures with private cost implications result in a return on investment in energy cost savings that will accrue over time, thus defraying some of the initial investment costs. The strategies were designed with a focus on actions with the highest return on investment.

Cost to Resident or Business (annual)	Low: \$0-\$100
	Medium: \$101-\$250
	High: \$251 or greater
Savings to Resident or Business (annual)	Low: \$0-\$100
	Medium: \$101-\$250
	High: \$251 or greater

ENERGY ACTION PLAN POTENTIAL ENERGY SAVINGS

Estimated potential annual energy savings in 2020 were calculated for each strategy and reported for residential and non-residential energy use where applicable. Combined, the strategies in the EAP can potentially reduce energy use by 3.9 million kWh and 37,000 therms.

Table 4-1: Summary of Potential 2020 Annual Energy Savings

Strategy Area	Strategy Title		2020 Annual Energy Savings	
			Electricity (kWh)	Natural Gas (therms)
Existing Structures	1.1	Expand outreach and education to increase participation in voluntary home energy-efficiency programs. Residential	378,165	14,586
	1.2	Expand outreach and education to increase participation in voluntary non-residential energy-efficiency programs. Non-Residential	1,313,385	9,428
New Construction	2.1	Improve compliance with Title 24, Part 6 – Green Building and Energy Efficiency Standards. Residential	87,271	3,048
		Non-Residential	214,265	4,254
	2.2	Provide incentives for buildings to exceed the current Title 24, Part 6 – Energy Efficiency Standards. Residential	6,747	988
		Non-Residential	13,849	290
Renewable Energy	3.1	Evaluate the City's residential, non-residential and municipal solar potential and assess barriers to increased solar energy use. Residential	1,210,854	
		Non-Residential	538,230	
	3.3	Encourage new development projects to meet 70% of their energy needs from renewable resources. Residential	49,198	2,680
		Non-Residential	64,629	1,354
Municipal Operations	4.1	Improve the energy efficiency of existing municipal structures. Municipal	20,053	808
	4.2	Evaluate the feasibility of improving energy efficiency of traffic signals and public lighting. Public Lighting	20,342	
	4.3	Evaluate the feasibility of improving energy efficiency of the wastewater system. Wastewater	19,376	
Water Efficiency	5.1	Encourage residents and businesses to conserve water used indoors. Water Efficiency	16,685	
	5.2	Encourage residents and businesses to conserve water used outdoors. Water Efficiency	14,722	
Total Potential 2020 Annual Energy Savings			3,967,770	37,436

ENERGY GOALS AND STRATEGIES

The goals and strategies in this section are focused on improving the energy efficiency of existing and future buildings, reducing costs associated with energy consumption in municipal buildings and operations, and reducing the carbon intensity of the community's energy sources. The goals in this chapter are interrelated, and many of the strategies, when implemented, may achieve multiple goals at the same time. The goals were designed with California's preferred "loading order" in mind for meeting energy demand: first cost-effective energy efficiency, then cost-effective renewable energy, and finally conventional energy sources. Understanding that many residents in Sutter Creek are renters and retirees, these goals will aim to include these populations in the applicable sectors.

SUMMARY OF GOALS AND STRATEGIES

GOAL 1: INCREASE ENERGY EFFICIENCY IN EXISTING STRUCTURES

- **Strategy 1.1:** Expand outreach and education to increase participation in voluntary home energy-efficiency programs.
- **Strategy 1.2:** Expand outreach and education to increase participation in voluntary non-residential energy-efficiency programs.
- **Strategy 1.3:** Identify and promote programs that help finance energy-efficiency, water-efficiency and renewable-energy projects.

GOAL 2: INCREASE THE ENERGY PERFORMANCE OF NEW CONSTRUCTION

- **Strategy 2.1:** Improve compliance with Title 24 Green Building and Energy Efficiency Standards.
- **Strategy 2.2:** Provide incentives for buildings to exceed the current Title 24 Energy Efficiency Standards.
- **Strategy 2.3:** Reduce the heat island effect and related summer heat gain in residential and non-residential projects.

GOAL 3: INCREASE LOCAL RENEWABLE ENERGY GENERATION/PRODUCTION

- **Strategy 3.1:** Evaluate the City's residential, non-residential and municipal solar potential and assess barriers to increased solar energy use.
- **Strategy 3.2:** Develop a comprehensive renewable-energy program that provides outreach, financing, and technical assistance.
- **Strategy 3.3:** Encourage new development projects to meet 70% of their energy needs from renewable sources.

GOAL 4: INCREASE ENERGY EFFICIENCY IN MUNICIPAL STRUCTURES AND OPERATIONS

- **Strategy 4.1:** Improve the energy efficiency of existing municipal structures.
- **Strategy 4.2:** Evaluate the feasibility of improving the energy efficiency of public lighting.
- **Strategy 4.3:** Evaluate the feasibility of improving the energy efficiency of the wastewater infrastructure.

GOAL 5: REDUCE WATER WASTE AND ASSOCIATED ENERGY USE

- **Strategy 5.1:** Encourage residents and businesses to reduce the waste of water and the embedded energy indoors.
- **Strategy 5.2:** Encourage residents and businesses to reduce the waste of water and the embedded energy outdoors.

- **Strategy 5.3:** Reduce the waste of water and the embedded energy in municipal buildings and landscapes.

GOAL 1: INCREASE ENERGY EFFICIENCY IN EXISTING STRUCTURES

Approximately 56% of the housing stock in Sutter Creek was built prior to the adoption of California's Title 24 Energy Efficiency Standards in 1978 and the non-residential building stock is likely similarly dated. Improving the energy efficiency of existing buildings will save homeowners and businesses money by reducing their long-term energy costs. Many energy-efficiency projects pay for themselves within a couple years or less. PG&E and the U.S. Department of Energy provide incentives, rebates and tax credits for energy efficiency projects that help offset the upfront costs. The City will leverage existing resources to expand education and outreach programs to promote energy efficiency in existing residential and non-residential structures, and promote local energy efficiency businesses in the area.

Strategy 1.1:

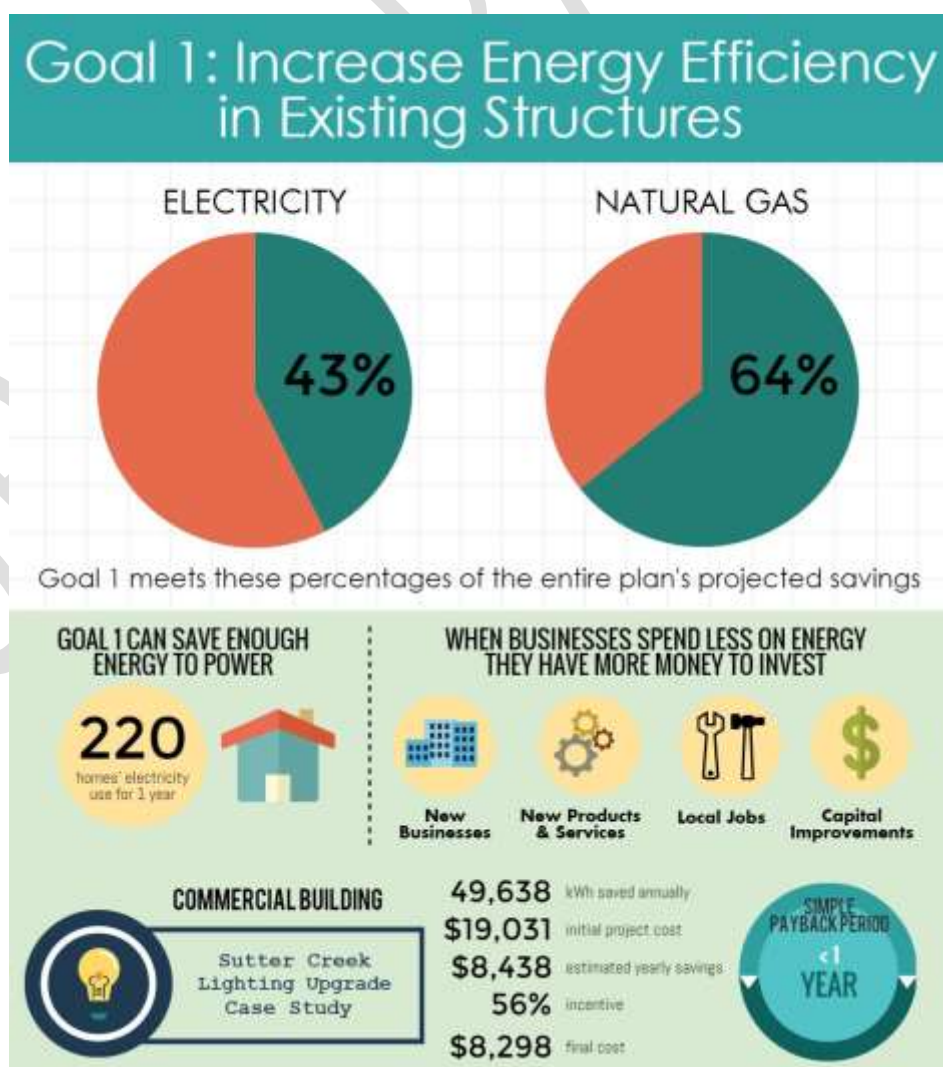
Expand outreach and education to increase participation in voluntary *home* energy-efficiency programs.

Strategy 1.2:

Expand outreach and education to increase participation in voluntary *non-residential* energy-efficiency programs.

Strategy 1.3:

Identify and promote programs that help finance energy-efficiency and renewable-energy



Strategy 1.1: Expand outreach and education to increase participation in voluntary home energy-efficiency programs.

Residential energy-efficiency improvements have the potential to reduce energy bills and GHG emissions. The City will partner with PG&E, Amador County, the Energy Upgrade California Alliance, Amador County Association of Realtors, and other community organizations to leverage existing resources and expand public education and outreach campaigns that encourage residents to voluntarily make energy-efficiency improvements within their homes and to take advantage of the low-cost energy-efficiency financing programs described below in Strategy 1.3. The City will expand outreach to include energy efficiency measures that can be practiced by the rental community as renters make up 52%⁶ of Sutter Creek residents,

As part of the outreach program, the City will include on its website information on available energy-efficiency rebates and incentive programs. The website will also link to local case studies of homes that have implemented cost-effective, energy-efficiency improvements when available.

IMPLEMENTATION ACTION		TIMELINE	RESPONSIBILITY
1	Partner with PG&E and Amador Tuolumne Community Action Agency to activate programs for income-eligible Sutter Creek residents.	Short-Term (1-2 years)	Planning & Building Departments
2	Partner with Amador County Association of Realtors to provide information on educational trainings and workshops.	Short-Term (1-2 years)	Planning & Building Departments
3	Partner with PG&E, the Energy Upgrade California alliance and other community organizations to increase participation in energy efficiency rebates and incentive programs.	Short-Term (1-2 years)	Planning & Building Departments
4	Include on the City's website information on and links to residential energy-efficiency rebates, incentives, and case studies.	Short-Term (1-2 years)	Planning & Building Departments
PERFORMANCE INDICATOR		TARGET	
1	Percentage of households participating in energy-efficiency rebate programs.	20% participating by 2020	
2	Percentage of households achieving an improvement in building energy efficiency.	20% achieving 30% savings in electricity use and 15% savings in natural gas use by 2020	
3	Number of households achieving an improvement in building energy efficiency	265 Existing Households	

Annual Energy Reduction Potential:

378,165 kWh
14,586 therms

Cost to City:

Low to Medium

Cost to Resident / Business Owner:

Low to High
(depending on finance program)

Savings to Resident / Business Owner:

Low to High
(depending on finance program)

Community Co-Benefits:

Reduced Energy Costs and Improved Air Quality

Potential Funding Sources:

Partnerships with Organizations and City Funds

⁶ 2010 United States Census Bureau, Sutter Creek, CA

PUBLIC DRAFT

Strategy 1.2: Expand outreach and education to increase participation in voluntary non-residential energy-efficiency programs.

Investments in building energy-efficiency retrofits can save considerable amounts of energy and reduce a business's operational costs. The greatest barriers to these improvements are lack of information about efficiency practices and scarcity of low-cost financing for the initial capital costs.

In partnership with PG&E, SBC and the Sierra Nevada Energy Watch program (SNEW), and potential local partners, including local businesses and schools, the City will provide outreach programs aimed at maximizing voluntary energy conservation within community businesses. These programs will target specific commercial sectors such as restaurants, supermarkets, retail, office, and manufacturing to provide useful energy and cost saving recommendations. The program will encourage businesses to conduct benchmarking⁷, energy audits and implement energy-efficiency projects. The City will include on its website information on energy-reduction programs specifically for commercial and industrial businesses. Case studies of businesses that implemented cost-effective, energy-efficiency improvements can be showcased on the website, focusing on those in Sutter Creek when possible.

IMPLEMENTATION ACTION		TIME TABLE	RESPONSIBILITY
1	Partner with PG&E and SBC to expand the SNEW program in Sutter Creek.	Short Term (1-2 years)	Planning & Building Departments City Manager's Office
2	Provide links on the City's website to tools that demonstrate the financial benefits of efficiency upgrades to local businesses.	Short-Term (1-2 years)	Planning & Building Departments
3	Include on the City's website information on and links to non-residential energy-efficiency rebates, incentives and case studies.	Short-Term (1-2 years)	Planning & Building Departments
PERFORMANCE INDICATOR		TARGET	
1	Number of businesses served by SNEW with energy-efficiency improvements.	49 served by 2020	
2	Percentage of businesses participating in energy-efficiency rebate programs.	50% participating by 2020	
3	Percentage of businesses achieving an improvement in building energy efficiency.	50% achieving 30% electricity and 10% natural gas savings by 2020	

Annual Energy Reduction Potential:

1,313,385 kWh
9,428 therms

Cost to City:
Low to Medium

Cost to Resident / Business Owner:
Low to High
(depending on finance program)

Savings to Resident / Business Owner:
Low to High
(depending on finance program)

Community Co-Benefits:
Reduced Energy Costs and Improved Air Quality

Potential Funding Sources:
Partnerships with Organizations and City Funds

⁷ Energy benchmarking compares a building's energy performance against that of similar buildings.

Strategy 1.3: Identify and promote programs that help finance energy-efficiency, water-efficiency and renewable-energy projects.

The up-front costs of energy-efficiency improvements can be a considerable barrier for many homeowners and businesses. However there are numerous options to address this challenge, including on-bill financing, low-interest loans, energy-efficient mortgages, and Property Assessed Clean Energy (PACE) programs.

One example, on-bill financing, works in conjunction with PG&E's energy-efficiency rebate and incentive programs to eliminate upfront costs. The cost of energy-efficiency retrofits is amortized on a property's monthly energy bills. The program helps eligible customers pay for energy efficient retrofit projects with zero-interest, zero-penalty loans. Loan payments are included on the customer's monthly utility bills and are set to not exceed the energy savings (in dollars) realized from the energy-efficiency retrofit. For further information refer to this report's implementation section and appendices.

Another example, Property Assessed Clean Energy (PACE) programs are an innovative financing tool that allows residential and non-residential property owners to receive financing for energy-efficiency, clean-energy and water-efficiency projects, which they repay through a voluntary special assessment on their property tax bill. There are several organizations in California that provide cities and counties in California with access to PACE financing programs at no-cost to the local governments. By opting into multiple programs, the City can help establish a competitive marketplace for PACE financing. Renters in Sutter Creek can take advantage of PG&E's Energy Savings Assistance Program which provides income-qualified customers with energy-saving improvements at no charge.

The City will partner with PG&E, community organizations and local banks to identify and promote existing and potential financing programs. The City will include links to financing programs on its website.

IMPLEMENTATION ACTION		TIME TABLE	RESPONSIBILITY
1	Partner with PG&E, community organizations and local banks to implement PACE financing and promote existing financing programs.	Short Term (1-2 years)	City Manager's Office
2	Include on the City's website descriptions of and links to existing financing programs for energy efficiency upgrades.	Short Term (1-2 years)	Planning & Building Departments
PERFORMANCE INDICATOR		TARGET	

**Annual Energy
Reduction
Potential:**

Supports Strategy
1.1 and 1.2

Cost to City:

Low to Medium

**Cost to Resident /
Business Owner:**

Low to High
(depending on
finance program)

**Savings to
Resident /**

Business Owner:

Low to High
(depending on
finance program)

**Community Co-
Benefits:**

Reduced Energy
Costs and
Improved Air
Quality

**Potential Funding
Sources:**

Partnerships with
Organizations,
Local Banks and
City Funds

1

N/A

N/A

GOAL 2:**INCREASE THE ENERGY PERFORMANCE OF NEW CONSTRUCTION**

New buildings offer a significant opportunity to achieve high levels of energy performance through advanced materials and holistic design. Additionally, renewable energy systems can be incorporated into project planning and construction to reduce upfront costs. The City will work with developers and contractors to improve the understanding and compliance with existing energy efficiency and green building standards and promote measures to exceed the energy efficiency standards. The City will also review the potential for incentives and recognition programs for buildings that exceed the Title 24 Energy Efficiency Standards. This direction compliments current City efforts to fully implement Title 24 Energy Efficiency Standards⁸

Strategy 2.1:

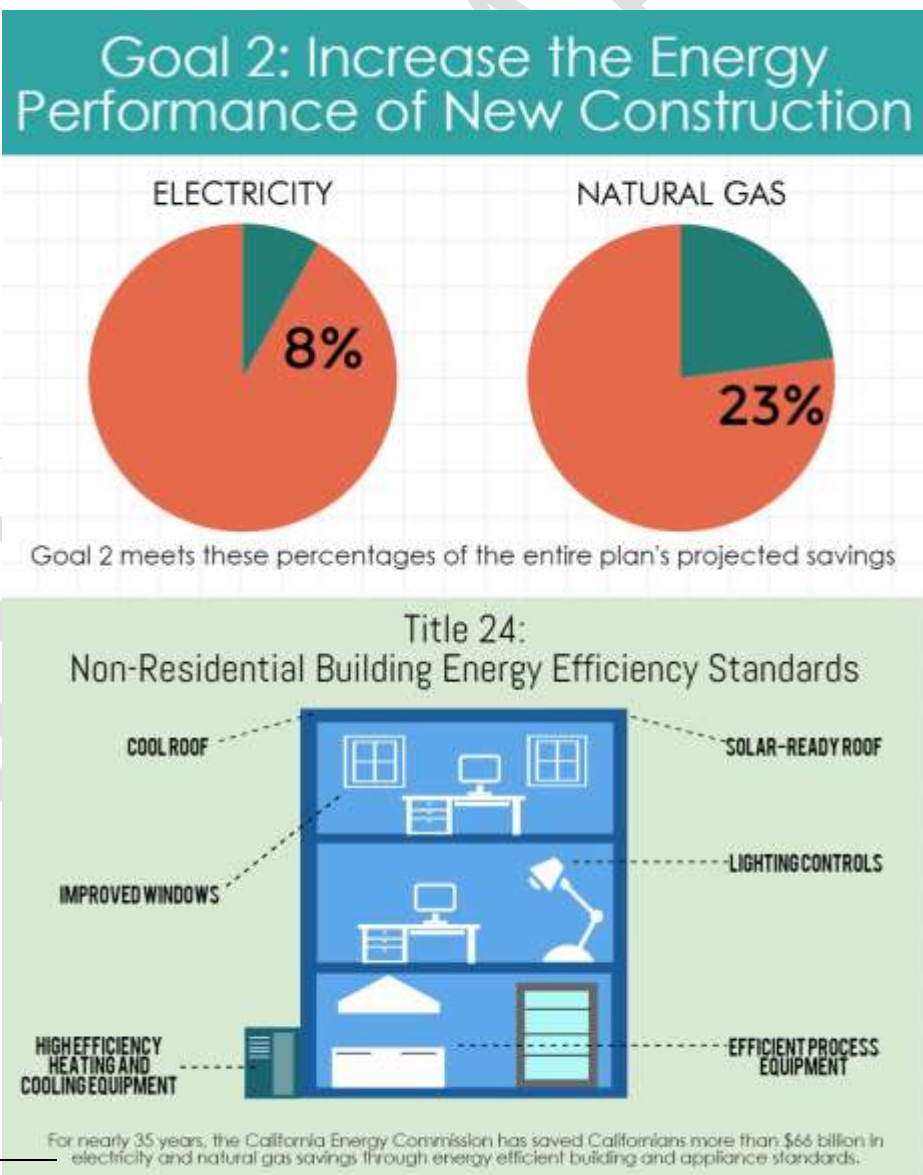
Improve compliance with Title 24 Green Building and Energy Efficiency Standards.

Strategy 2.2:

Provide incentives for buildings to exceed the current Title 24 Energy Efficiency Standards.

Strategy 2.3:

Reduce the heat island effect and related summer heat gain in residential and non-residential projects.



⁸ Sutter Creek 2014-2019 Joint Housing Element - Program H-3.2.

Strategy 2.1: Improve compliance with Title 24 Green Building and Energy Efficiency Standards.

The 2013 revisions to the Title 24 Green Building (Part 11) and Energy Efficiency Standards (Part 6) help make new construction significantly more energy efficient. The 2013 Energy Efficiency Standards are expected to be 25% more efficient than previous standards for residential construction and 30% more efficient for non-residential construction according to the California Energy Commission.⁹ The California Green Building Standards include mandatory as well as voluntary green building measures that also have energy saving benefits. Assisting developers and contractors in understanding the standards will help them achieve higher efficiencies on their projects. The energy reduction potential is based on full compliance with the standards.

The City will provide opportunities for building officials and planning department staff to attend Title 24 energy and green building trainings, as well as promote trainings and educational materials to contractors and developers via local contractors associations and other groups. EnergyCodeACE and PG&E offer free Title 24, Part 6 tools, trainings and resources to assist the building industry, related stakeholders and the public to comply with the 2013 Building Energy Efficiency Standards.

IMPLEMENTATION ACTION		TIME TABLE	RESPONSIBILITY
1	Provide opportunities for City building officials and planning department staff to attend Title 24 trainings.	Short Term (1-2 years)	Planning & Building Departments
2	Include links to Title 24 energy and green building trainings and educational resources on the City's website.	Short Term (1-2 years)	Planning & Building Departments
3	Outreach to local contractors association to provide trainings and best practices to its members.	Short Term (1-2 years)	Planning & Building Departments
PERFORMANCE INDICATOR		TARGET	
1	Percentage of City staff that attended Title 24 energy and green building trainings.	100% of Planning & Building staff by 2020	
2	Percentage of New Construction complying with Title 24.	100% of New Construction by 2020	

Annual Energy Reduction Potential:

301,536 kWh
7,302 therms

Cost to City:
Low

Cost to Resident / Business Owner:
None

Savings to Resident / Business Owner:
High

Community Co-Benefits:
Reduced Energy Costs and Improved Air Quality

Potential Funding Sources:
Partnerships with Organizations and City Funds

⁹ http://www.energy.ca.gov/releases/2012_releases/2012-05-31_energy_commission_approves_more_efficient_buildings_nr.html

Strategy 2.2: Provide incentives for buildings to exceed the current Title 24 Energy Efficiency Standards.

Providing incentives for energy-efficient buildings, such as priority permit review, encourages developers to explore incorporating energy-efficient building features into their projects, which can save the property owner and tenants money over the life of the building. Reduced permitting time can be an effective incentive because it can translate to significant savings for developers that are paying interest on construction or bridge loans during the permit approval process.

The City will determine the feasibility of providing incentives or awards for buildings that exceed the current Title 24 Energy Efficiency Standards. The City will provide information to contractors and developers on available incentives and education resources related to energy efficiency and green building. The City's website will include information on available incentives and educational resources.

IMPLEMENTATION ACTION		TIME TABLE	RESPONSIBILITY
1	Explore incentives or awards that encourage applicants to exceed Title 24 energy efficiency standards. Research what other jurisdictions have implemented.	Short Term (1-2 years)	Planning & Building Departments
2	Determine the feasibility of providing incentives or awards for new buildings that exceed Title 24 energy efficiency standards.	Short Term (1-2 years)	Planning & Building Departments
3	If feasible, establish priority permit review for projects that exceed Title 24 energy efficiency standards.	Short Term (1-2 years)	Planning & Building Departments
PERFORMANCE INDICATOR		TARGET	
1	Percentage of new residential housing units exceeding Title 24 energy efficiency standards.	15% of new residential buildings exceed energy efficiency standards by 30% by 2020	
2	Percentage of new non-residential buildings exceeding Title 24 energy efficiency standards.	15% of new non-residential buildings exceed energy efficiency standards by 15% by 2020	

Annual Energy Reduction Potential:

20,596 kWh
1,278 therms

Cost to City:

Low

Cost to Resident / Business Owner:

None

Savings to Resident / Business Owner:

High

Community Co-Benefits:

Reduced Energy Costs and Improved Air Quality

Potential Funding Sources:

Partnerships with Organizations and City Funds

Strategy 2.3: Reduce the heat island effect¹⁰ and related summer heat gain in residential and non-residential projects.

Trees, shade structures, cool (high albedo / solar reflectance) paving and roofing materials reduce the amount of solar energy absorbed and therefore temperature of rooftops and parking lots. By increasing the use of shading and cool paving and roofing materials it is possible to reduce heat gain in residential buildings and commercial centers. This decrease in ambient air temperatures and reduced heat gain in warm summer months can reduce the amount of energy required for air conditioning.

Requirements could include: a) tree standards for existing streets and parking lots; b) heat gain mitigation requirements for new parking lots (through the use of shade structures, trees or cool pavement, etc.); c) cool roofing requirements for new construction. Shade structures can also accommodate solar panels thus serving a dual purpose.

The City will develop design guidelines and/or municipal codes to reduce cooling loads through the use of shade trees, shade structures, cool pavement and cool roofs in new construction. Guidelines developed will be consistent with the City's designated historic districts.

IMPLEMENTATION ACTION		TIME TABLE	RESPONSIBILITY
1	Develop a landscaping ordinance and/or design guidelines to include parking lot heat-gain mitigation measures. Included would be a focus on shade trees and their energy benefits as well as guidance on tree types, planting, and maintenance. Any new design guidelines will conform to existing historic district requirements.	Near Term (3-5 years)	Planning & Building Departments
2	Require new development projects with parking lots to mitigate heat gain through the use of shade trees, shade structures with or without solar arrays, or cool pavement.	Near Term (3-5 years)	Planning & Building Departments
3	Promote the installation of solar shade structures by requiring new development projects with more than 50 spaces to obtain and submit a quote for solar shade structures with the permit application.	Near Term (3-5 years)	Planning & Building Departments
PERFORMANCE INDICATOR		TARGET	
N/A		N/A	

**Annual Energy
Reduction
Potential:**

Supports

 Strategies 2.1 and
2.2

Cost to City:

Medium to High

**Cost to Resident /
Business Owner:**

None

**Savings to
Resident /**
Business Owner:

Medium

**Community Co-
Benefits:**

 Reduced Energy
Costs and
Improved Air
Quality

**Potential Funding
Sources:**

 Partnerships with
Organizations and
City Funds

¹⁰ Increase in ambient air temperature due to excess heat created by non-permeable surfaces (such as roofs and pavement) being exposed to high temperatures during hot sunny days.

GOAL 3: INCREASE LOCAL RENEWABLE ENERGY GENERATION / PRODUCTION

Local renewable-energy projects benefit the City's economy by creating jobs and reducing energy costs. In Sutter Creek there are unique opportunities for generating energy from renewable sources including geothermal, cogeneration (also known as combined heat and power, or CHP), wind, biomass, and solar. Rooftops and parking lots provide excellent opportunities for solar energy generation. In particular, non-residential and municipal facilities tend to have large, flat roofs that are well suited for solar equipment. Additionally, Amador County is home to bountiful forests that need to be maintained to reduce catastrophic fire risk. Sustainably managing forests can provide Sutter Creek government facilities and community members with significant biomass resources that can be used to generate electricity and useful heat. Utilizing new biomass boilers can also significantly reduce emissions compared to open burning of piles. Geothermal and cogeneration offer convenient ways to utilize heat produced by the earth as well as heat energy produced as a result of facility processes. Geothermal sources can be integrated in residential and non-residential buildings, while cogeneration can be integrated into industrial and municipal facilities.

Strategy 3.1:

Evaluate the City's residential, non-residential and municipal solar potential and assess barriers to increased solar energy use.

Strategy 3.2:

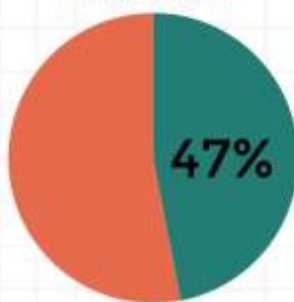
Develop a comprehensive renewable-energy program that provides outreach, financing, and technical assistance.

Strategy 3.3:

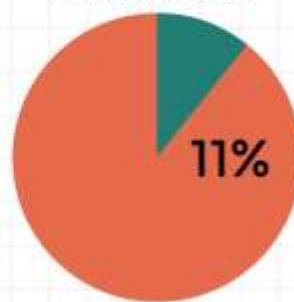
Encourage new development projects to meet 70% of their energy needs from renewable sources.

Goal 3: Increase Local Renewable Energy Generation/Production

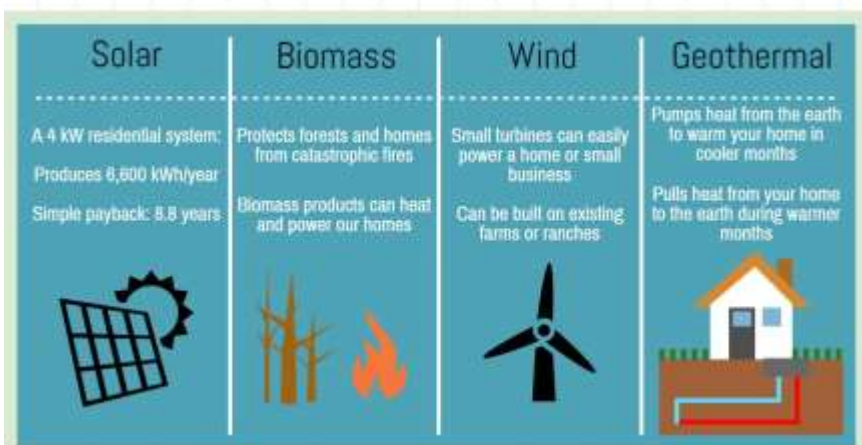
ELECTRICITY



NATURAL GAS



Goal 3 meets these percentages of the entire plan's projected savings



Strategy 3.1: Evaluate the City’s residential, non-residential and municipal solar potential and assess barriers to increased solar energy use.

To facilitate installation of renewable-energy systems, the City will evaluate the solar potential within Sutter Creek, taking into account design constraints in the Historic Districts. The City will also formulate and evaluate strategies needed to expand solar use. The City currently streamlines the permitting process, and will identify if there are any other barriers to solar installations. A streamlined permitting process using existing best practices will be developed to further promote and expedite the installation of solar systems. The City will also explore incorporating a requirement for solar easements in new developments (per General Plan policy 3-23 in the Conservation and Open Space Element.).

The American Solar Transformation Initiative (ASTI) provides no-cost planning assistance to local governments in California to develop a Solar Roadmap for their communities. The program provides participating local governments with an assessment of local solar market potential, estimated economic and environmental impacts, assessment of current solar processes and customized solar roadmaps to accelerate solar installations.

IMPLEMENTATION ACTION		TIME TABLE	RESPONSIBILITY
1	Evaluate the residential, non-residential and municipal solar potential in the community.	Short Term (1-2 years)	Planning & Building Departments
2	Review existing permitting process and identify barriers to solar installations. Consider a requirement for solar easements in new developments.	Short Term (1-2 years)	Planning & Building Departments
3	Develop streamlined permitting process for solar installations.	Short Term (1-2 years)	Planning & Building Departments
PERFORMANCE INDICATOR		TARGET	
1	kWs of solar installed on residential structures.	706 kWs by 2020	
2	Number of homes installing solar systems	133 Households by 2020	
3	kWs of solar installed on non-residential structures.	314 kWs by 2020	
4	Number of non-residential structures installing solar systems	20 Non-Residential Structures by 2020	

Annual Energy Reduction Potential:

1,749,083 kWh

Cost to City:

Low to High

Cost to Resident / Business Owner:

None to High (depending on finance program)

Savings to Resident / Business Owner:

None to High (depending on finance program)

Community Co-Benefits:

Reduced Energy Costs and Improved Air Quality

Potential Funding Sources:

American Solar Transformation Initiative and City Funds

Strategy 3.2: Develop a comprehensive renewable-energy program that provides outreach, financing, and technical assistance.

Outreach efforts should aim to maximize community participation in renewable-energy generation and emphasize energy cost savings. The program should make information available on how home and business owners can incorporate renewable energy systems into their living and working environments. Geothermal ground source heat pump units are one example of viable renewable energy heating and cooling systems that utilize the earth's constant temperature to reach high efficiencies. Solar water heating is a proven technology that has a short payback period, providing owners with cost savings and two to three year paybacks, when solely owner-financed.

The City will maintain a page on their website dedicated to renewable-energy programs with tools available for making informed decisions on renewable energy, financing options and the permitting process. PG&E offers customers an opportunity to participate in a Community Solar program in which they can utilize renewable energy if they lack the capacity to support renewable infrastructure. The American Solar Transformation Initiative provides participating local governments with a jurisdiction-specific public landing page for community education, including tools to evaluate the costs of solar projects and to request and compare quotes from local and regional solar vendors. The City will work with PG&E, community organizations and local banks to expand and promote available financing programs.

IMPLEMENTATION ACTION		TIME TABLE	RESPONSIBILITY
1	Partner with PG&E and community organizations to provide educational materials and tools to help owners make informed decisions about the costs and benefits of renewable-energy projects.	Short Term (1-2 years)	Planning & Building Departments
2	Update the City's website with links and tools to evaluate renewable-energy systems and how to request quotes from local and regional solar vendors.	Short Term (1-2 years)	Planning & Building Departments
3	Partner with PG&E, community organizations and local banks to expand and promote available financing options.	Short Term (1-2 years)	Planning & Building Departments
PERFORMANCE INDICATOR		TARGET	
	N/A		N/A

Annual Energy Reduction Potential:

Supports Strategy 3.1

Cost to City:

Low to Medium

Cost to Resident / Business Owner:

None

Savings to Resident /

Business Owner:

None

Community Co-Benefits:

Reduced Energy Costs and Improved Air Quality

Potential Funding Sources:

American Solar Transformation Initiative and City Funds

Strategy 3.3: Encourage new development projects to meet 70% of their energy needs from renewable sources.

Ground source heat pumps, biomass boilers, solar water heating (SWH) and photovoltaic solar systems (PV) are proven technologies that can be used to replace traditional energy use in the built environment. Commercial-scale SWH systems are designed to provide large quantities of hot water using solar energy. A typical SWH system includes roof or wall-mounted solar collectors that work with a pump, heat exchanger, and storage tanks. SWH systems can dramatically reduce the amount of natural gas or electricity used for heating water, lowering the fossil-fuel energy use associated with water heating.

Solar PV systems have reduced in cost significantly over the last decade and will often have payback periods of 8 to 15 years. Additionally, there are new financing mechanisms such as power purchase agreements, solar leases and Property Assessed Clean Energy (PACE) financing available where property owners can receive the benefits of solar power with little to no upfront costs. The federal renewable energy tax credit provides homeowners with a tax credit for 30% of qualified expenditures. There are also incentives for non-residential buildings as well, which are currently set to expire on December 31, 2016.

Providing recognition or awards for projects that will meet 70% of its energy needs from renewable sources will further incentivize this program.

IMPLEMENTATION ACTION		TIME TABLE	RESPONSIBILITY
1	Determine the feasibility of providing incentives or awards for new buildings that meet 70% of energy needs from renewable sources.	Short Term (1-2 years)	Planning & Building Departments
2	Provide information to contractors and developers on the current incentives for renewable energy systems during plan review.	Short Term (1-2 years)	Planning & Building Departments
PERFORMANCE INDICATOR		TARGET	
1	Percentage of new residential construction that meets 70% of energy needs with renewable energy.	15% of residential new construction by 2020	
2	Percentage of new non-residential construction that meets 70% of energy needs with renewable energy.	15% of non-residential new construction by 2020	

Annual Energy Reduction Potential:

113,826 kWh
4,034 therms

Cost to City:

Low to Medium

Cost to Resident / Business Owner:

None to High
(depending on finance program)

Savings to Resident / Business Owner:

None to High
(depending on finance program)

Community Co-Benefits:

Reduced Energy Costs and Improved Air Quality

Potential Funding Sources:

Partnerships with Organizations, American Solar Transformation Initiative and City Funds

GOAL 4: INCREASE ENERGY EFFICIENCY IN MUNICIPAL STRUCTURES AND OPERATIONS

Measures undertaken by the City to improve energy efficiency not only reduces energy costs but also sets an example for the local community and the surrounding areas. The 2005 municipal operations inventory indicated that the City consumed 299,000 kWh of electricity in municipal buildings, wastewater facilities, and public lighting. The three largest consumers were public lighting (34%), wastewater treatment (32%) and City Hall (26%). Additionally the City consumed 4,000 therms of natural gas, the majority of which was consumed by City Hall (72%). Installing Energy-Star rated equipment, lighting controls and programmable thermostats can reduce this energy use. Benchmarking municipal buildings and facilities with EPA's Portfolio Manager is the first step to track energy use and evaluate opportunities to save energy and money.

Strategy 4.1:

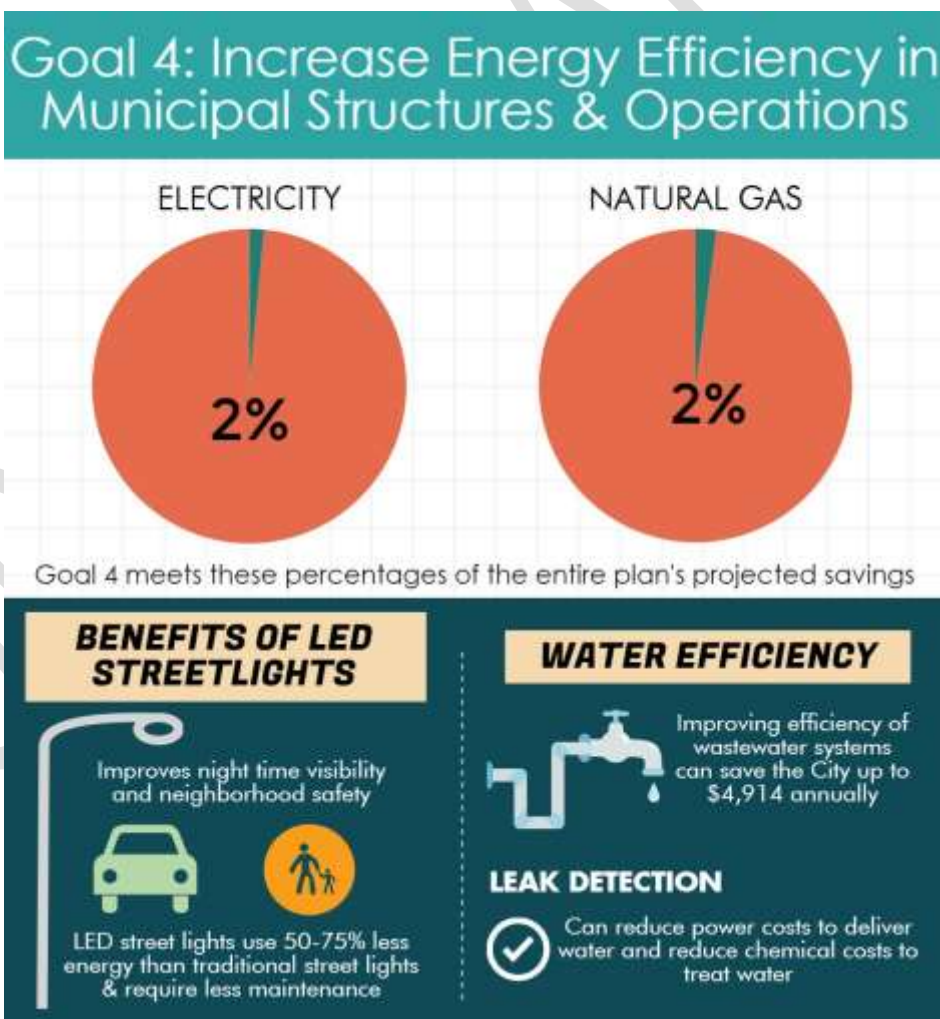
Improve the energy efficiency of existing municipal structures.

Strategy 4.2:

Evaluate the feasibility of improving the energy efficiency of public lighting.

Strategy 4.3:

Evaluate the feasibility of improving the energy efficiency of the wastewater infrastructure.



Strategy 4.1: Improve energy efficiency of existing municipal structures.

The City will establish a purchasing policy that requires new electrical equipment to be Energy Star rated (or similar energy usage rating). In addition, the City will explore the feasibility of using smart thermostats and upgrading to energy efficient appliances in municipal buildings. The City will benchmark municipal facilities using the free EPA Energy Star Portfolio Manager software to track energy use and determine the energy efficiency of existing facilities. The facilities with the greatest energy use or highest energy intensity will be targeted for energy audits and retro-commissioning¹¹ to optimize energy use and identify energy-efficiency opportunities. City department heads could establish department-level goals for reducing energy use within their own departments to help reach the City's overall efficiency goals.

IMPLEMENTATION ACTION		TIME TABLE	RESPONSIBILITY
1	Establish a purchasing requirement that all new electrical equipment be Energy Star rated when available.	Short Term (1-2 years)	City Manager's Office
2	Benchmark City facilities using the EPA Energy Star Portfolio Manager, prioritizing them by the greatest energy use or highest energy intensity.	Short Term (1-2 years)	City Manager's Office
3	Conduct energy audit and retro-commissioning of City facilities.	Near Term (3-5 years)	City Manager's Office
PERFORMANCE INDICATOR		TARGET	
1	Purchasing policy in place.	2016	
2	Benchmark City facilities.	2016	
3	Audit and retro-commission City facilities.	2018	
4	Percentage of existing buildings energy use reduced.	20% of energy use reduced by 2020	

Annual Energy Reduction Potential:

 20,053 kWh
 808 therms

Cost to City:
 Low to High

Cost to Resident / Business Owner:
 None

Savings to Resident / Business Owner:
 None

Community Co-Benefits:
 Reduced Energy Costs and Improved Air Quality

Potential Funding Sources:
 Partnerships with Organizations, Energy Service Companies and City Funds

¹¹ Retro-commissioning is a systematic process to improve an existing building's energy performance and occupants comfort through a whole-building systems approach

Strategy 4.2: Evaluate the feasibility of improving the energy efficiency of public lighting.

Replacing street lights with high efficiency LEDs not only reduces energy costs, but improves visibility and safety through more uniform lighting distribution, as well as reduced direct and reflected light which contributes to sky glow. In 2005, the City used 101,710 kWh for street lighting spending about \$30,800 on public lighting. In 2013, fourteen of the City-owned street lights were upgraded to more energy-efficient lighting. The City will determine the feasibility and evaluate the cost-effectiveness of further upgrading streetlights and other public lighting to higher efficiency lighting such as LEDs.

PG&E offers rebates for the replacement of streetlights with LEDs and full turnkey LED replacement services to local governments. As a result of the August 2015 Planning Commission EAP Study Session, the City of Sutter Creek has been added to PG&E's turnkey LED streetlight replacement program starting in 2016.

IMPLEMENTATION ACTION		TIME TABLE	RESPONSIBILITY
1	Evaluate cost-effectiveness of further upgrading street lights and other outdoor public lighting to LEDs. Identify phasing & funding sources to offset costs.	Near Term (3-5 years)	Public Works Department City Manager's Office
PERFORMANCE INDICATOR		TARGET	
1	Street and other outdoor lights upgraded.	100% upgrade by 2020	
2	Percentage of public lighting energy use reduced.	20% of energy use reduced by 2020	

Annual Energy Reduction Potential:

20,342 kWh

Cost to City:

Low to High

Cost to Resident / Business Owner:

None

Savings to Resident / Business Owner:
Business Owner:

None

Community Co-Benefits:

Reduced Energy Costs and Improved Air Quality

Potential Funding Sources:

Partnerships with Organizations, PG&E and City Funds

Strategy 4.3: Evaluate the feasibility of improving the energy efficiency of the wastewater infrastructure.

In 2005, the City used 96,880 kWh of electricity for wastewater treatment spending about \$11,000 on wastewater treatment. The City will require energy-efficiency analysis in all wastewater planning documents and facility upgrades by including energy-efficiency provisions in City-released RFPs.

The City will also benchmark the wastewater facilities using the free EPA Energy Star Portfolio Manager software and Energy Use Assessment Tool to track energy use, conduct utility bill analysis and identify efficiency opportunities. The City will evaluate the feasibility of conducting audits of the wastewater system to identify energy-efficiency improvements to pumps and the treatment plant. The City will also evaluate the feasibility of using the biogas produced at the wastewater treatment plant to offset the electricity usage required at the plant, as well as evaluate the potential for other solar energy production. PG&E offers technical assistance incentives and rebates for the installation of energy-efficient equipment to local governments.

IMPLEMENTATION ACTION		TIME TABLE	RESPONSIBILITY
1	Require energy-efficiency analysis in all wastewater planning documents and facility upgrades.	Short Term (1-2 years)	Public Works Department City Manager's Office
2	Benchmark wastewater treatment facilities using EPA's Portfolio Manager and Energy Use Assessment Tool.	Short Term (1-2 years)	Public Works Department City Manager's Office
3	Evaluate the feasibility of conducting energy audits and the use of biogas for energy at the wastewater plant.	Near Term (3-5 years)	Public Works Department
PERFORMANCE INDICATOR		TARGET	
1	Energy Efficiency RFP policy complete	2016	
2	Wastewater facilities benchmarked	2016	
3	Percent of wastewater facility energy use reduced	20% reduction in energy use by 2020	

Annual Energy Reduction Potential:

19,376 kWh

Cost to City:

Low to High

Cost to Resident / Business Owner:

Low

Savings to Resident / Business Owner:

Low

Community Co-Benefits:

Reduced Energy Costs, Reduced Wastewater Costs and Improved Air Quality

Potential Funding Sources:

Partnerships with Organizations, Energy Service Companies, PG&E and City Funds

GOAL 5: REDUCE WATER WASTE AND ASSOCIATED ENERGY USE

The State of California has a goal to reduce per capita water use, especially in drought years. In a typical California home the major indoor water users are toilets (33%), showers (22%), faucets (18%), washing machines (14%), and leaks (12%). Dishwashers rank last – 1%.¹² Given that indoor water is delivered to a few, readily identifiable appliances, it is easy to target those with the greatest water efficiency potential. Since it typically requires significant energy to source, treat and deliver water to community members; water efficiency measures have the effect of reducing the amount of energy needed to provide water. The City's General Plan also supports conversion of non-metered water service to metered service (Policy 3.7, Conservation and Open Space Element). Organizing a working group, comprised of citizens as well as elected officials and City staff, could benefit the community's actions to reduce water waste and the embedded energy.

Strategy 5.1:

Encourage residents and businesses to reduce the waste of water and the embedded energy indoors.

Strategy 5.2:

Encourage residents and businesses to reduce the waste of water and the embedded energy outdoors.

Strategy 5.3:

Reduce the waste of water and the embedded energy in municipal buildings and landscapes.



¹² California Water Plan Update, Chapter 3. Urban Water Use Efficiency. 2013.
http://www.water.ca.gov/calendar/materials/vol3_urbanwue_apr_release_16033.pdf

Strategy 5.1: Encourage residents and businesses to reduce the waste of water and the embedded energy indoors.

The measures below focus on those most readily implementable in light of existing rebate/retrofit programs. Based on the 2013 study referenced in the footnote below, use of more water efficient toilets, showers, faucets, washing machines and leak detection could reduce water usage by 15 gallons per capita per day (GPCD), a 25% reduction from typical daily residential water usage of 62 GPCD.

The City will continue to encourage residents and businesses to voluntarily reduce their water usage alongside Amador Water Agency's (AWA) "Do-It-Yourself" Home Water Audit which offers home water-saving tips, and as outlined in Water Code Section 2.19 Water Conservation¹³ to prevent unreasonable waste of water. The City will work with AWA and PG&E to explore the feasibility of implementing new water-efficiency programs. Programs could include a toilet swap event or free low-flow showerhead/faucet fixture giveaways

IMPLEMENTATION ACTION		TIME TABLE	RESPONSIBILITY
1	Work with AWA to promote existing water-efficiency programs in Sutter Creek.	Short Term (1-2 years)	City Manager's Office
2	Explore with AWA and PG&E the feasibility of implementing water efficiency programs, including converting non-metered water service to metered service.	Near Term (3-5 years)	City Manager's Office
3	Collaborate with AWA to redesign the water bill format to encourage water conservation in residential and commercial uses.	Near Term (3-5 years)	City Manager's Office
PERFORMANCE INDICATOR		TARGET	
1	Percentage of households and businesses that voluntarily reduce indoor water use by 20% or more.	100% of households by 2020 ¹⁴	

Annual Energy Reduction Potential:

16,685 kWh

Cost to City:

Low

Cost to Resident / Business Owner:

Low

Savings to Resident / Business Owner:

Low

Community Co-Benefits:

Reduced Water Use, Reduced Wastewater Costs and Reduced Energy Costs

Potential Funding Sources:

Partnerships with AWA other Organizations and City Funds

¹³ Amador Water Agency Water Code Section 2.19 Water Conservation, <http://www.amadorwater.org/PDFdocs/09-2015-Water-Conservation-Policy.pdf>

¹⁴ Urban and agricultural water suppliers who do not meet the 20% reduction required by SB X7-7 (enacted in 2009) will not be eligible for state water grants or loans.

Strategy 5.2: Encourage residents and businesses to reduce the waste of water and the embedded energy outdoors.

Significant water savings can be achieved in the outdoor environment through a few readily implementable programs. The City will work with Amador Water Agency (AWA) to evaluate the feasibility of providing Water-Wise house calls where a trained water-efficiency specialist will, on request, visit homes, review indoor and outdoor water needs, make water-efficiency recommendations and provide water-saving devices or if desired, will install certain water-saving devices. Additionally, the City will work with AWA to evaluate the feasibility of offering Water-Wise business calls where trained technicians will come to a commercial site, check for leaks, conduct outdoor irrigation check-ups and provide watering schedules.

The City will work with PG&E and AWA to expand education and incentive programs to encourage residents and businesses to voluntarily reduce their water usage. The City will encourage or require new construction to include California Green Building Code's (CALGreen) voluntary water-efficiency measures. Priority permit review for projects meeting or exceeding the voluntary CALGreen water-efficiency measures will be examined for feasibility.

IMPLEMENTATION ACTION		TIME TABLE	RESPONSIBILITY
1	Work with AWA to evaluate the feasibility of offering Water-Wise programs and additional water-efficiency rebates.	Short Term (1-2 years)	City Manager's Office
2	Encourage use of CALGreen water-efficiency measures as guidance for builders, contractors, and realtors, and distribute information on trainings and workshops.	Short Term (1-2 years)	Planning & Building Departments
3	Evaluate the feasibility of requiring or offering incentives for participating in the voluntary CALGreen water-efficiency measures, installing rainwater catchment or greywater systems.	Short Term (1-2 years)	Planning & Building Departments
PERFORMANCE INDICATOR		TARGET	
1	Percentage of households and businesses that voluntarily reduce outdoor water use by 20% or more.	100% of households by 2020	

Annual Energy Reduction Potential:

14,722 kWh

Cost to City:

Low

Cost to Resident / Business Owner:

Low

Savings to Resident / Business Owner:

Low

Community Co-Benefits:

Reduced Water Use and Reduced Energy Costs

Potential Funding Sources:

Partnerships with AWA, other Organizations and City Funds

Strategy 5.3: Reduce the waste of water and the embedded energy in municipal buildings and landscapes.

Water-waste reduction and water conservation education can be effectively communicated by the City's ability to lead by example. To do this, the City should benchmark municipal facilities current water usage. After a baseline usage has been set, the City should then set reduction goals that align with Amador Water Agency's Stage 2 Water Warning 21-30% reduction in monthly water use over 2013 usage¹⁵.

The City should install water-efficient landscaping in areas managed by the City to serve as public demonstration areas. Additionally, demonstrations or case studies of rainwater catchment or greywater systems should be available to homeowners to promote local onsite water reuse.

IMPLEMENTATION ACTION		TIME TABLE	RESPONSIBILITY
1	Benchmark water usage in municipal buildings & set reduction goals of at least 25%.	Near Term (3-5 years)	Planning & Public Works Departments
2	Install water-efficient landscaping and design a demonstration zero-water landscape as a teaching tool for reducing outdoor water use.	Near Term (3-5 years)	Planning & Public Works Departments
3	Design a demonstration rainwater catchment and/or greywater system as a teaching tool for promoting onsite water resources.	Near Term (3-5 years)	Planning & Public Works Departments
PERFORMANCE INDICATOR		TARGET	
1	Percentage of water reduced in municipal buildings and landscapes.	25% reduction by 2020	
2	Demonstration zero-water landscape designed	2018	
3	Demonstration rainwater catchment and/or greywater designed.	2018	

Annual Energy Reduction Potential:

Supports Strategies 5.1 and 5.2

Cost to City:
Low

Cost to Resident / Business Owner:
Low

Savings to Resident / Business Owner:
Low

Community Co-Benefits:
Reduced Water Use and Reduced Energy Costs

Potential Funding Sources:
Partnerships with AWA, other Organizations and City Funds

¹⁵ Amador Water Agency Water Code Section 2.19 Water Conservation, <http://www.amadorwater.org/PDFdocs/09-2015-Water-Conservation-Policy.pdf>

CHAPTER 5: PLAN IMPLEMENTATION

This chapter provides a roadmap for implementing the EAP. The City of Sutter Creek recognizes that a clear and straight-forward implementation program is essential to achieve the goals of the EAP. To successfully implement the EAP, the City, regional organizations, and community members will need to work together and leverage existing and new national and state programs.

Ensuring the strategies translate from policy language into on-the-ground results is critical to the success of the EAP. To facilitate this, each strategy described in Chapter 4 contains a table that identifies the specific actions the City can carry out in order to achieve the identified goals. The second section of each table provides performance indicators and targets that enable staff, Council members, and the public to track strategy implementation and evaluate the effectiveness of the EAP.

Evaluating the effectiveness of the EAP requires two key tasks: evaluation of the EAP as a whole and evaluation of the individual strategies. Community-wide emissions inventories provide the best indication of the overall EAP effectiveness, although it will be important to reconcile actual growth in the City versus the growth projected in the forecasts developed for the EAP. Conducting these inventories periodically, instead of annually, will allow direct comparison to the 2005 baseline while lessening the impact on staff resources. It is recommended that inventories are completed at least every 5 years in order to monitor the effect of the EAP and adapt the strategies and actions to reach the identified goals.

While community-wide inventories will provide information about the EAP's overall effectiveness, it will be important to understand the effectiveness of each strategy in order to prioritize future actions. Evaluating strategy performance will require data on community participation rates and the associated energy savings. With the support of PG&E, the City should coordinate strategy evaluation on the same schedule as the community-wide inventories and summarize progress towards meeting the identified performance targets. For the EAP to remain relevant, the City must be prepared to evaluate and revise the strategies and actions over time. It is likely new information, technology, and programs will emerge; therefore, the City must be ready to take advantage of these opportunities. Additionally, the City should prepare interim progress reports, using a template provided by SBC, on an annual basis to track performance.

IMPLEMENTATION PROGRAM

The Implementation Program identifies specific actions and steps the City can take to achieve the specified 2020 targets. The following matrix prioritizes the actions by year based on staff resources, potential funding availability, and partner organization's capacity. The matrix serves as a guidepost for staff to initiate actions in order to implement the EAP and track progress.

Table 5-1: EAP Implementation Matrix¹⁶

YEAR	IMPLEMENTATION ACTION	SUPPORTS	RESPONSIBILITY	INFORMATION SOURCES
2016	Partner with PG&E and regional organizations to activate existing energy-efficiency, water-efficiency and renewable-energy programs.	1.1.1 1.1.3 1.2.1 3.2.1 5.1.1	City Manager's Office, Planning & Building Departments	Pacific Gas and Electric Company, Energy Upgrade California, Sierra Business Council & Amador Tuolumne Community Action Agency
	Partner with program implementers to authorize PACE financing and Water Wise programs.	1.3.1 5.2.1	City Manager's Office	Center for Sustainable Energy & Amador Water Agency
	Provide information on and opportunities for staff, contractors, realtors, homeowners and developers to attend training on energy and green building.	1.1.2 2.1.1 2.1.2 2.1.3 5.2.2	Planning & Building Departments	Pacific Gas and Electric Company, Amador County Association of Realtors & Energy Code ACE
	Develop solar roadmap to analyze solar potential, review barriers to solar and streamline permitting.	3.1.1 3.1.2 3.1.3	Planning & Building Departments	American Solar Transformation Initiative
	Adopt purchasing guidelines, energy-efficiency analysis requirements in RFPs and benchmark municipal facilities.	4.1.1 4.1.2 4.3.1	City Manager's Office & Public Works Department	Pacific Gas and Electric Company
2017	Update the City's website with information and links to energy-efficiency, water-efficiency and renewable-energy programs, case studies, financing programs.	1.1.4 1.2.2 1.2.3 1.3.2	Planning & Building Departments	Pacific Gas and Electric Company, Energy Upgrade California, Sierra Business Council & Amador Tuolumne Community Action Agency
	Determine the feasibility of offering incentives for new construction that completes a green building checklist including: exceed Title 24 energy requirements, meet 70% of energy needs with on-site renewables and exceed water efficiency requirements.	2.2.1 2.2.2 2.2.3 3.3.1 5.2.3	Planning & Building Departments	Pacific Gas and Electric Company, Sierra Business Council, Build It Green & U.S. Green Building Council
	Partner with PG&E, local banks and other organizations to expand financing options for energy-efficiency, renewable-energy and water-efficiency projects.	3.2.2 3.2.3 3.3.2	City Manager's Office Planning & Building Departments	Pacific Gas and Electric Company & American Solar Transformation Initiative
2018	Develop heat gain mitigation guidelines and ordinances for streets and parking lots.	2.3.1 2.3.2 2.3.3	Planning & Building Departments	Pacific Gas and Electric Company
	Conduct energy audits and retro-commissioning of municipal facilities and lighting. Implement cost-effective energy-efficiency projects.	4.1.3 4.2.1 4.3.2 4.3.3	City Manager's Office & Public Works Department	Pacific Gas and Electric Company & Sierra Business Council
	Work with community organizations to redesign water bills to reduce water waste, develop new water-efficiency programs and market programs in Sutter Creek including demonstrations projects.	5.1.2 5.1.3 5.3.1 5.3.2 5.3.3	City Manager's Office, Planning & Public Works Departments	Pacific Gas and Electric Company & Amador Water Agency

¹⁶ Numbering system (1.1.1) refers to Goal 1, Strategy 1, Action 1, etc.

FUNDING SOURCES AND FINANCING MECHANISMS

This section describes potential funding sources and financing mechanisms that the City can pursue to offset the financial burden of implementing the EAP. Each EAP strategy is accompanied with a simplified analysis of costs and savings, potential funding sources, and partnership opportunities. The spectrum of potential public and private funding sources is ever evolving and will need to be continually evaluated. This section outlines funding options that are currently available (as of September 2015). For additional information on energy efficiency programs and financing programs refer to Appendix D and F, respectively.

- U.S. Department of Energy (DOE)
- California Energy Commission (CEC)
- California Infrastructure and Economic Development Bank (IBANK)
- California Statewide Communities Development Authority (CSCDA)
- Pacific Gas and Electric Company (PG&E)

U.S. Department of Energy

The U.S. DOE provides formula grant funding and technical assistance for state and local governments to manage weatherization and clean energy programs including the Weatherization Assistance Program, State Energy Program, Energy Efficiency and Conservation Block Grant Program, and American Solar Transformation Initiative.

California Energy Commission

The CEC offers low-interest loans to public institutions to finance energy-efficiency and energy generation projects on a first-come, first-serve basis. Interest rates are currently between zero and one percent. The CEC also manages the Energy Partnership Program, which provides no-cost (up to \$20,000) technical assistance to public agencies. Technical assistance includes conducting energy audits, preparing feasibility studies, contractor assistance, and design review consultation among other services. The CEC also funds Energy Upgrade California, which was designed to be Californian's one-stop-shop for home and business improvement projects that lower energy use and conserve water and natural resources. Californians can use the site to plan upgrade projects, locate participating contractors, and find rebates and incentives including up to \$6,500 towards whole house energy upgrades.

California Infrastructure and Economic Development Bank

The IBANK finances public infrastructure and private development that promotes opportunities for local jobs, contributes to a strong economy, and improves the quality of life in California communities. In September 2014, California IBANK launched the California Lending for Energy and Environmental Needs Center (CLEEN Center) and the Statewide Energy Efficiency Program (SWEEP) to provide low-cost financing to State and local governments for approved energy efficiency projects. The targets will be clean energy projects such as generation, distribution, transmission and storage; energy conservation measures; environmental mitigation measures; and water and wastewater treatment and distribution.

California Statewide Communities Development Authority

The CSCDA is a joint powers authority with more than 500 cities, counties, and special districts as Program Participants. CSCDA provides California's local governments with an effective tool for the timely financing of community-based public benefit projects. CSCDA provides program participants with two energy financing programs. The Sustainable Energy Bond Program, which provides access to tax-exempt financing for energy efficiency projects through contracts with Energy Service Companies that contain guaranteed energy savings to cover the full cost of all retrofit work. The OPEN PACE program provides local governments with a turnkey resource for residential and commercial property owners to finance energy efficiency, renewable energy and water conservation. OPEN PACE provides local governments with a competitive marketplace for PACE Program Administrators that meet specific qualifications. Program Administrators will develop managed contractor networks within the community, provide 100% financing and file repayment obligations through the property tax bills.

Pacific Gas and Electric Company

PG&E provides technical assistance, rebates, incentives, and financing options to promote energy efficiency and renewable energy projects. For Residential customers, PG&E offers income-eligible customers monthly discounts and free energy saving improvements. PG&E also offers appliance rebates and whole-home upgrade incentives. For Non-Residential customers, PG&E offers the Energy Efficiency Financing program, which provides businesses and government agencies access to 0% loans up to \$100,000 for businesses and \$250,000 for government agencies. PG&E also offers incentives and technical assistance to improve the operational performance of facilities' equipment, lighting, and control systems through a Retro-commissioning program. Additionally, PG&E offers design assistance, incentives, and educational resources for new construction that exceeds Title 24 energy efficiency standards through the Savings By Design program.

APPENDIX A: SUTTER CREEK 2005 BASELINE ENERGY USE

Pacific Gas and Electric Company (PG&E) provided the majority of electricity used in the City of Sutter Creek in 2005, as well as all of the natural gas. The 2005 aggregated electricity consumption data was provided by PG&E for all accounts within the City limits. Independent energy service providers provided a small percentage as direct-access electricity. Direct-access electricity is energy supplied by a competitive energy service provider other than a utility, but uses a utility's transmission lines to distribute the energy. Due to confidentiality laws, PG&E was unable to release direct-access electricity data. The 2005 direct-access electricity consumption in Sutter Creek was estimated from County-level direct-access electricity data provided by the California Energy Commission (CEC). The total direct-access electricity consumption for Amador County was used to determine the ratio of direct-access electricity to utility-provided electricity for residential and non-residential energy use. This County-level ratio was applied to the PG&E-provided electricity used in Sutter Creek to estimate the direct-access electricity consumed within the City. Additionally, transmission and distribution losses associated with electricity consumed in Sutter Creek was estimated based on the Environmental Protection Agency's Emissions & Generation Resource Integrated Database (eGRID) Western Grid average loss factor for 2005.

Table A-1: Sutter Creek 2005 Baseline Community-Wide Residential Energy Use

Energy Source	Value	Units	Data Source
Electricity Consumption - PG&E	8,933,033	kWh	Pacific Gas and Electric
Electricity Consumption - Direct Access	16,905	kWh	California Energy Commission
Electricity Consumption – Transmission & Distribution	504,189	kWh	eGRID 2005 Western Grid Loss Factor
Total Electricity Consumption	9,454,127	kWh	
Natural Gas – PG&E	486,197	therms	Pacific Gas and Electric

Table A-2: Sutter Creek 2005 Baseline Community-Wide Non-Residential Energy Use

Energy Source	Value	Units	Data Source
Electricity Consumption - PG&E	7,077,534	kWh	Pacific Gas and Electric
Electricity Consumption - Direct Access	1,494,328	kWh	California Energy Commission
Electricity Consumption – Transmission & Distribution	482,890	kWh	eGRID 2005 Western Grid Loss Factor
Total Electricity Consumption	9,054,752	kWh	
Natural Gas – PG&E	192,601	therms	Pacific Gas and Electric

PG&E provided 2005 electricity and natural gas consumption data for all accounts paid for by the City of Sutter Creek. Electricity usage includes consumption at the facilities as well as the transmission and distribution losses associated with the transportation of electricity from power plants to homes and businesses.

Table A-3: Sutter Creek 2005 Baseline Municipal-Operations Energy Use

Energy Source	Value	Units	Data Source
Wastewater Facilities Electricity	96,880	kWh	Pacific Gas and Electric
City Hall Electricity	78,018	kWh	Pacific Gas and Electric
Community Building	18,412	kWh	Pacific Gas and Electric
Old Monteverde Store	3,833	kWh	Pacific Gas and Electric
PG&E Owned Street Lights	98,846	kWh	Pacific Gas and Electric
City Owned Lighting	2,864	kWh	Pacific Gas and Electric
Total Municipal Electricity Consumption	298,853	kWh	Including PG&E Owned Street Lights and Transmission & Distribution Losses
City Hall Natural Gas	2,913	therms	Pacific Gas and Electric
Community Building	267	therms	Pacific Gas and Electric
Old Monteverde Store	862	therms	Pacific Gas and Electric
Total Municipal Natural Gas Consumption	4,042	therms	Pacific Gas and Electric

APPENDIX B: SUTTER CREEK BUSINESS-AS-USUAL ENERGY USE FORECAST

Business-as-usual (BAU) community-wide energy usage was forecast using the Statewide Energy Efficiency Collaborative ClearPath California forecasting tool. Municipal energy use, included in non-residential energy use, was not forecast separately. Residential energy use was forecast using the housing units reported by the California Department of Finance (CA DOF) for Sutter Creek for 2005 and housing unit projections for 2013 and 2025 based on the Amador County Transportation Commission (ACTC) UPlan projections developed for the Regional Transportation Plan (RTP). Non-residential energy use was forecast using the actual change in non-residential square footage from Sutter Creek permit data from 2005 to 2013 and the projected non-residential new construction square footage in Sutter Creek for 2013 and 2025 based on the ACTC UPlan projections developed for the RTP. Annualized growth rates for each time period were calculated using the standard formula.

$$\text{Annualized Growth Rate} = (X/Y)^{(1/(Z-1))}-1$$

Where: X = Forecast End Year Energy Use

Y = Baseline Year Energy Use

Z = Number of Years in the Forecast

Table B-1: BAU Residential Energy Use Forecast Growth Indicators and Annualized Growth Rates

Year	Population	Growth Indicator Source
2005	1,327	CA DOF Housing Unit Estimates
2013	1,329	
2025	1,488	
		ACTC UPlan Housing Unit Projections
Time Period	Annualized Growth Rate	
2005-2013	0.000188	CA DOF Housing Unit Estimates and ACTC UPlan Projections
2013-2025	0.009462	ACTC UPlan Housing Unit Projections

Table B-2: BAU Non-Residential Energy Use Forecast Growth Indicators and Annualized Growth Rates

Year	Square Footage	Growth Indicator Source
2005	519,103	Sutter Creek Permit Data Square Footage
2013	579,400	ACTC UPlan Non-Residential Square Footage Projections
2035	771,000	
Time Period	Annualized Growth Rate	
2005-2013	0.013831	Sutter Creek Permit Data Square Footage and ACTC Projections
2013-2025	0.013071	ACTC UPlan Non-Residential Square Footage Projections

Annualized growth rates for Sutter Creek housing units and non-residential square footage were calculated for the ClearPath California time periods required to forecast energy use.

Table B-3: ClearPath California BAU Energy Use Forecast Annualized Growth Rates.

Energy Use Sector	Growth Indicator	Growth Indicator Source	Annualized Growth Rate (2005-2009)	Annualized Growth Rate (2010-2014)	Annualized Growth Rate (2015-2020)
Residential	Housing Units	CA DOF & ACTC	0.000188	0.002036	0.009462
Non-Residential	Square Footage	ACTC	0.013831	0.013679	0.013071

Table B-4: BAU Residential Energy Use Forecast by Energy Source

Energy Source	2005 Residential Energy Use	2020 Residential Energy Use	2005-2020 Change in Energy Use
Electricity (kWh)	9,454,127	10,113,774	659,648
Natural Gas (therms)	486,197	520,110	33,913

Table B-5: BAU Non-Residential Energy Use Forecast by Energy Source

Energy Source	2005 Non- Residential Energy Use	2020 Non-Residential Energy Use	2005-2020 Change in Energy Use
Electricity (kWh)	9,054,752	11,068,075	2,013,323
Natural Gas (therms)	192,601	235,430	42,829

APPENDIX C: POTENTIAL ENERGY REDUCTION CALCULATIONS

This appendix shows the calculations for potential energy reductions resulting from implementation of each quantifiable EAP strategy. For each strategy, calculation inputs are highlighted in yellow and results are highlighted in green.

Strategy 1.1: Expand outreach and education to increase participation in voluntary home energy-efficiency programs.		
Target: 20% of Existing Households Reduce Electricity Use 20% and Natural Gas use 15% by 2020		
Baseline Year	2005	
Baseline Annual Residential Energy Use	9,454,127	kWh - Electricity
	486,197	therms - Natural Gas
Baseline Number of Households	1,327	Housing Units
2020 Target Percent of Households Participating	20%	of existing homes
2020 Target Percent Energy Reduction From Baseline Year	20%	of electricity use
	15%	of natural gas use
2020 Participating Households = Baseline Households x Percent Participating =	265	Housing Units
2020 Electricity Savings = Baseline Energy Use x Percent Participating x Percent Reduction =	378,165	kWh - Electricity
2020 Natural Gas Savings = Baseline Energy Use x Percent Participating x Percent Reduction =	14,586	therms - Natural Gas

Strategy 1.2: Expand outreach and education to increase participation in voluntary non-residential energy-efficiency programs.		
Target: 50% of Existing Businesses Reduce Electricity Use by 30% and Natural Gas Use by 10% by 2020		
Baseline Year	2005	
Baseline Annual Non-Residential Energy Use	8,755,899	kWh - Electricity
	188,559	therms - Natural Gas
Baseline Non-Residential Square Footage	519	Thousand Square Feet
2020 Target Percent Participating	50%	of existing square footage
2020 Target Percent Energy Reduction From Baseline	30%	of electricity use
	10%	of natural gas use
2020 Participating Businesses = Non-Res Sq Footage x Percent Participating =	260	Thousand Square Feet
2020 Electricity Savings = Baseline Energy Use x Percent Participating x Percent Reduction =	1,313,385	kWh - Electricity
2020 Natural Gas Savings = Baseline Energy Use x Percent Participating x Percent Reduction =	9,428	therms - Natural Gas

Strategy 2.1: Improve compliance with Title 24 Green Building and Energy Efficiency Standards.		
Target: 100% of New Construction meets Title 24 Green Building and Energy Efficiency Standards		
Baseline Year	2005	
Residential Forecast 2014-to-2020 Energy Use Increase Without Title-24 Compliance	555,821	kWh - Electricity
	28,570	therms - Natural Gas
Non-Residential Forecast 2014-to-2020 Energy Use Increase Without Title-24 Compliance	829,776	kWh - Electricity
	17,150	therms - Natural Gas
Projected New Housing Construction (UPLAN)	30.61%	Single Family
	69.39%	Multi-Family
Percent of Residential Energy Use Associated with Space Heating, Cooling, Indoor Lighting and Water Heating (2004 CEC) ¹⁷	Electricity	Natural Gas
	37%	88%
2008 Title 24 Energy Savings Associated with Space Heating, Cooling, Indoor Lighting and Water Heating (2008 CEC) ¹⁸	Electricity	Natural Gas
	Single Family (SF)	22.7%
	Multi-Family (MF)	19.7%
	Non-Residential (Non-Res)	4.9%
Percent of Residential Energy Use Associated with Space Heating, Cooling, Indoor Lighting and Water Heating (2010 CEC) ¹⁹	Electricity	Natural Gas
	32%	86%
2013 Title 24 Energy Savings Associated with Space Heating, Cooling, Indoor Lighting and Water Heating (2013 CEC) ²⁰	Electricity	Natural Gas
	Single Family (SF)	36.4%
	Multi-Family (MF)	23.3%
	Non-Residential (Non-Res)	22%
2020 Residential Energy Savings from 2008 Title 24: = Forecast 2014-to-2020 Energy Use x Percent Covered Energy Use x [(Percent SF x 2008 SF Percent Savings) + (Percent MF x 2008 MF Percent Savings)] =	42,402	kWh - Electricity
	1,991	therms - Natural Gas
2020 Residential Energy Savings from 2013 Title 24: = (Forecast 2014-to-2020 Energy Use - 2008 Title 24 Energy Savings) x Percent Covered Energy Use x [(Percent SF x 2013 SF Percent Savings) + (Percent MF x 2013 MF Percent Savings)] =	44,869	kWh - Electricity
	1,058	therms - Natural Gas
2020 Residential Energy Savings from 2008 and 2013 Title 24: = 2008 Title 24 Energy Savings + 2013 Title 24 Energy Savings =	87,271	kWh - Electricity
	3,048	therms - Natural Gas
2020 Non-Residential Energy Savings from 2008 Title 24: = Non-Res = Forecast 2014-to-2020 Energy Use x 2008 Non-Res Percent Savings	40,659	kWh - Electricity
	1,612	therms - Natural Gas
2020 Non-Residential Energy Savings from 2013 Title 24: = (Forecast 2014-to-2020 Energy Use - 2008 Title 24 Energy Savings) x 2013 Non-Res Percent Savings	173,606	kWh - Electricity
	2,641	therms - Natural Gas
2020 Non-Residential Energy Savings from 2008 and 2013 Title 24: = 2008 Title 24 Energy Savings + 2013 Title 24 Energy Savings =	214,265	kWh - Electricity
	4,254	therms - Natural Gas

¹⁷ 2004 CEC http://www.energy.ca.gov/reports/400-04-009/2004-08-17_400-04-009ES.PDF

¹⁸ 2008 CEC http://www.energy.ca.gov/title24/2008standards/rulemaking/documents/2007-11-07_IMPACT_ANALYSIS.PDF

¹⁹ 2010 CEC <http://www.energy.ca.gov/2010publications/CEC-200-2010-004/CEC-200-2010-004-ES.PDF>

²⁰ 2013 CEC <http://www.energy.ca.gov/2013publications/CEC-400-2013-008/CEC-400-2013-008.pdf>

Strategy 2.2: Provide incentives for buildings to exceed the current Title 24 Energy Efficiency Standards.		
Target: 15% of New Construction Reduces Energy Use Beyond Title 24 Requirements (Residential 30% and Non-Residential 15%)		
Baseline Year	2005	
Forecast 2014-to-2020 Energy Use Increase Without Title 24 Compliance	Residential	
	555,821	kWh - Electricity
	28,570	therms - Natural Gas
	Non-Residential	
	829,776	kWh - Electricity
	17,150	therms - Natural Gas
2020 Energy Savings from 2008 and 2013 Title 24 Compliance (See Strategy 2.1)	Residential	
	87,271	kWh - Electricity
	3,048	therms - Natural Gas
	Non-Residential	
	214,265	kWh - Electricity
	4,254	therms - Natural Gas
Forecast 2014-to-2020 Energy Use Increase After Title 24 Compliance	Residential	
	468,550	kWh - Electricity
	25,522	therms - Natural Gas
	Non-Residential	
	615,511	kWh - Electricity
	12,896	therms - Natural Gas
Percent of Residential Energy Use Associated with Space Heating, Cooling, Indoor Lighting and Water Heating (2010 CEC)	Electricity	Natural Gas
	32%	86%
2020 Target Percent Participation	15%	Residential
	15%	Non-Residential
2020 Target Percent Energy Savings	30%	Residential
	15%	Non-Residential
2020 Energy Savings Beyond Title 24 Requirements: = Forecast 2014-to-2020 Energy Use Increase After Title 24 Compliance x Percent Participation x Percent Energy Savings =	Residential	
	6,747	kWh - Electricity
	988	therms - Natural Gas
	Non-Residential	
	13,849	kWh - Electricity
	290	therms - Natural Gas

Strategy 3.1: Evaluate the City's residential, non-residential and municipal solar potential and assess barriers to increased solar energy use.
Target: 10% of Existing Households and 20 Businesses Install Solar PV by 2020

Baseline Year	2005	
2020 Target Potential Installations	1,327	Residential
	Unknown	Non-Residential
Number of Existing Installations 2008-2013 (2015 CSI) ²¹	32	Residential
	4	Non-Residential
Total kW of Existing Installations 2008-2013 (2015 CSI)	170	kW Residential
	63	kW Non-Residential
2020 Target Percent Participating	10%	Residential Households
	20	Non-Residential Installations
Average Hours of Electricity Production (2014 CSI) ²²	4.70	Hours / Day
2020 Number of Participants = Potential Installations x Percent Participating =	133	Residential
	20	Non-Residential
2020 kW Solar Installed = Number of Participants x Total Size of Existing Installations / Number of Existing =	706	kW Residential
	314	kW Non-Residential
2020 Solar-Produced Electricity = 2020 kW Solar Installed x Average Hours per Day Production x 365 Days / Year =	1,210,854	kWh - Residential Electricity
	538,230	kWh - Non-Res Electricity

Strategy 3.3: Encourage new development projects to meet 70% of their energy needs from renewable resources.
Target: 15% of New Developments Meet 70% of Energy Need with Renewable Energy by 2020

Baseline Year	2005	
Forecast 2014-to-2020 Energy Use Increase After Title 24 Compliance (See Strategy 2.2)	Residential	
	468,550	kWh - Electricity
	25,522	therms - Natural Gas
	Non-Residential	
	615,511	kWh - Electricity
	12,896	therms - Natural Gas
2020 Target Percent Participating	15%	Residential
	15%	Non-Residential
2020 Target Percent Provided by Renewables	70%	Residential
	70%	Non-Residential
2020 Non-renewable Energy Savings = Forecast Energy Use Increase After Title 24 Compliance x Percent Participating x Percent Provided by Renewables =	Residential	
	49,198	kWh - Electricity
	2,680	therms - Natural Gas
	Non-Residential	
	64,629	kWh - Electricity
	1,354	therms - Natural Gas

²¹ 2015 CSI https://www.californiasolarstatistics.ca.gov/current_data_files/
²² 2014 CSI <http://www.csi-epbb.com/default.aspx>

Strategy 4.1: Improve the energy efficiency of existing municipal structures.**Target: Reduce Energy Use in Municipal Buildings by 20% by 2020**

Baseline Year	2005	
Baseline Annual Municipal-Operations Energy Use	100,263	kWh - Electricity
	4,042	therms - Natural Gas
2020 Target Percent Energy Reduction	20%	of energy use
2020 Electricity Savings = Baseline Energy Use x Percent Reduction =	20,053	kWh - Electricity
2020 Natural Gas Savings = Baseline Energy Use x Percent Reduction =	808	therms - Natural Gas

Strategy 4.2: Evaluate cost-effectiveness of improving energy efficiency of public lighting.**Target: Reduce Energy Used by the City for Public Lighting by 20% by 2020**

Baseline Year	2005	
Baseline Annual Municipal-Operations Energy Use Street Lights and Other Lighting	101,710	kWh - Electricity
2020 Target Percent Energy Reduction	20%	of energy use
2020 Street and Other Lighting Savings = Baseline Energy Use x Percent Reduction =	20,342	kWh - Electricity

Strategy 4.3: Evaluate the feasibility of improving the energy efficiency of the wastewater infrastructure.**Target: Reduce Energy Used by the City for Wastewater Treatment Systems by 20% by 2020**

Baseline Year	2005	
Baseline Annual Municipal-Operations Energy Use Wastewater	96,880	kWh - Electricity
2020 Target Percent Energy Reduction	20%	of energy use
2020 Wastewater Systems Energy Savings = Baseline Energy Use x Percent Reduction =	19,376	kWh - Electricity

Strategy 5.1: Encourage residents and businesses to conserve water used indoors.		
Target: 100% of Households and Businesses Reduce Indoor Water Use by 20% by 2020		
Baseline Year	2005	
Baseline Year Population	2,636	People
Amador Water Agency (AWA) 2005 System Average Gallons Per Capita Per Day (GPCD)	185	Gallons / Capita / Day
Percent of Urban Water Demand (2013 CA WPU) ²³	31%	Residential Indoor
	45%	Landscape Irrigation
	20%	Non-Residential Indoor
2020 Target Percent Reduction in Indoor Water Use	20%	of water use
2010 Tanner Water Treatment Plant (WTP) Treatment and Distribution Energy Use	673,522	kWh - Electricity
2010 Tanner Water Treatment Plant (WTP) Treatment and Distribution Water Production	732.872	Million Gallons
2010 Tanner Energy Use Intensity = Tanner WTP Energy Use / Tanner WTP Water Production =	919	kWh / Million Gallons
2005 Estimated Indoor Water Use = Total GPCD x (Percent Res + Percent Non-Res) =	94	Gallons / Capita / Day
2005 Estimated Annual Indoor Water Use = 2005 Estimated Indoor Water Use x Baseline Year Population * 365 Days Per Year / 1,000,000 =	91	Million Gallons
2020 Reduced Indoor Water Use = 2005 Estimated Annual Indoor Water Use x Percent Reduction =	18	Million Gallons
2020 Energy Savings from Reduced Indoor Water Use = 2020 Reduced Indoor Water Use x 2010 Tanner Energy Use Intensity =	16,685	kWh / Year

²³ 2013 California Water Plan Update: http://www.waterplan.water.ca.gov/docs/cwpu2013/2013-prd/Vol3_Cho3_UrbanWUE_PubReviewDraft_Final_PDFed_co.pdf

Strategy 5.2: Encourage residents and businesses to conserve water used Outdoors.		
Target: 100% of Households and Businesses Reduce Outdoor Water Use by 20% by 2020		
Baseline Year	2005	
Baseline Year Population	2,636	People
Amador Water Agency (AWA) 2005 System Average Gallons Per Capita Per Day (GPCD)	185	Gallons / Capita / Day
Percent of Urban Water Demand (2013 CA WPU) ²⁴	31%	Residential Indoor
	45%	Landscape Irrigation
	20%	Non-Residential Indoor
2020 Target Percent Reduction in Outdoor Water Use	20%	of water use
2010 Tanner Water Treatment Plant (WTP) Treatment and Distribution Energy Use	673,522	kWh - Electricity
2010 Tanner Water Treatment Plant (WTP) Treatment and Distribution Water Production	732.872	Million Gallons
2010 Tanner Energy Use Intensity = Tanner WTP Energy Use / Tanner WTP Water Production =	919	kWh / Million Gallons
2005 Estimated Outdoor Water Use = Total GPCD x (Percent Landscape Irrigation) =	83	Gallons / Capita / Day
2005 Estimated Annual Outdoor Water Use = 2005 Estimated Outdoor Water Use x Baseline Year Population * 365 Days Per Year / 1,000,000 =	80	Million Gallons
2020 Reduced Outdoor Water Use = 2005 Estimated Annual Outdoor Water Use x Percent Reduction =	16	Million Gallons
2020 Energy Savings from Reduced Outdoor Water Use = 2020 Reduced Outdoor Water Use x 2010 Tanner Energy Use Intensity =	14,722	kWh / Year

²⁴ 2013 California Water Plan Update: http://www.waterplan.water.ca.gov/docs/cwpu2013/2013-prd/Vol3_Cho3_UrbanWUE_PubReviewDraft_Final_PDFed_co.pdf

APPENDIX D: EXISTING ENERGY EFFICIENCY PROGRAMS, POLICIES AND CODES IN SUTTER CREEK

Table D-1: Existing Energy Efficiency Programs

EXISTING PROGRAMS	DESCRIPTION
<ul style="list-style-type: none"> Pacific Gas & Electric Company (PG&E) 	PG&E offers incentives, rebates and educational resources to residents, businesses, non-profits and government agencies in Sutter Creek. (http://www.pge.com/)
<ul style="list-style-type: none"> Sierra Business Council (SBC) 	SBC administers the Sierra Nevada Energy Watch program, delivering cost effective energy-efficiency projects and benchmarking services to businesses, non-profits, and government agencies in Sutter Creek. SBC also offers consulting services to governments on energy and climate planning. (http://sierrabusiness.org/)
<ul style="list-style-type: none"> Amador Tuolumne Community Action Agency 	ATCCA works to help individuals in Amador and Tuolumne counties towards self-sufficiency, assist local residents in becoming more involved and contributing members of the community, promote family environments, and form healthy partnerships within the community to help satisfy the aforementioned needs. (http://www.atcca.org)
<ul style="list-style-type: none"> Amador Water Agency 	AWA provides water to all of Sutter Creek, and offers water-efficient fixtures for free as a resource for its customers. (www.amadorwater.org)
<ul style="list-style-type: none"> GRID Alternatives 	GRID Alternatives is a nonprofit organization that brings the benefits of solar technology to communities that would not otherwise have access, providing needed savings for families and preparing workers for jobs in the fast-growing solar industry. (http://www.gridalternatives.org/)
<ul style="list-style-type: none"> TRC Energy Services 	TRC Energy Services administers the California Advanced Homes program, which highlights best practices in energy efficiency, green building and sustainability, and offers generous financial incentives to help builders and architects create environmentally friendly, energy-efficient communities for potential home buyers. (http://cahp-pge.com/)

Table D-2: Existing Energy Efficiency Policies and Codes

EXISTING POLICIES/CODES	DESCRIPTION
GENERAL PLAN (1994)	
<ul style="list-style-type: none"> Conservation and Open Space Element 	Convert non-metered water service to metered service to better monitor water usage (General Plan recommendation, p.CO-6)
	All water connections in the City should be metered (Policy 3.7, p.CO-19)
	Use native drought tolerant plants for landscaping (Policy 3.8, p.CO-19)
	Incorporate solar access easements in new developments (Policy 3.23, p. CO-23)
<ul style="list-style-type: none"> Housing Element (2014-2019) 	...Sutter Creek shall promote energy and water conservation designs and features in residential developments (Policy H-3.2)
	...Sutter Creek will enforce the State of California's Title 24 energy requirements. (Program H-3.2)
	...Sutter Creek shall consider working...with local utility companies to implement energy awareness programs. (Policy H-3.3)
	...Sutter Creek shall continue to support GP&E's weatherization program ... (Program H-3.3.)
	...Sutter Creek will consider partnering with ...PG&E to promote energy saving programs...and with CARE, REACH and FERA. (Program H-3.4)
MUNICIPAL CODE (UPDATED AS OF DECEMBER 2012)	Section 14.10.010 – adopts State of California's Model Water Efficient Landscape Ordinance of September 2009 by references on February 2, 2010. Ordinance is on file at City offices.
2013 GENERAL PLAN ANNUAL REPORT	City approved the PG&E street light replacement program, approved an energy efficient light standard for Sutter Creek and upgraded fourteen street lights.
SUTTER CREEK DESIGN STANDARDS (RECOMMENDED TO CITY COUNCIL AUGUST 24, 2015)	Design guidelines oriented toward solar and energy efficiency <ul style="list-style-type: none"> - Consideration of solar access in development projects (pp. 11, 12, 14, 15) - Common entryways (p. 24) - Use of natural light to reduce energy consumption (p. 71) - Use of skylights to increase energy efficiency (p. 73) Use of energy-efficient timer systems in commercial businesses (p. 77)

APPENDIX E: PG&E AND OTHER ENERGY EFFICIENCY PROGRAMS

This appendix lists programs and rebates currently offered by PG&E and other organizations, as of the publishing of the EAP. A full description of current incentives programs can be found online.

Table E-1: Existing Residential Energy Efficiency Programs

ENERGY EFFICIENCY PROGRAMS	DESCRIPTION
<ul style="list-style-type: none"> Home Upgrade 	PG&E's Home Upgrade program offers rebates of up to \$2,500 to help homeowners focus on their building shell to maintain a warmer or cooler indoor environment while lowering energy bills. Improvements may include attic, wall and floor insulation, duct sealing, furnace and AC replacements, and more. https://www.energyupgradeca.org/en/
<ul style="list-style-type: none"> Advanced Home Upgrade 	PG&E's Advanced Home Upgrade program offers rebates up to \$6,500 to go beyond building shell upgrades and is typically more complex, involving deep improvements. A Home Upgrade Professional will conduct a comprehensive energy assessment using energy-modeling software to create a customized energy-saving plan for your home. https://www.energyupgradeca.org/en/
<ul style="list-style-type: none"> SmartAC™ 	PG&E's SmartAC program offers the opportunity to help prevent summer energy supply emergencies from disrupting day to day activities. Upon joining, SmartAC will install their free SmartAC device. Once installed, the customer will receive a SmartAC reward check. http://www.pge.com/smartac
<ul style="list-style-type: none"> SmartRate™ 	PG&E's SmartRate program gives a discount at 3¢ per kWh on the customer's June through September monthly rate, or the equivalent of 23% off Tier 1 usage. In exchange, the customer pays a surcharge of 60¢ per kWh for 2-7PM usage between 9 and 15 PG&E SmartDays™, May through October. With SmartRate automatic bill protection, the first summer is risk free. http://www.pge.com/smartrate
<ul style="list-style-type: none"> Home Appliance Rebate 	PG&E offers residential customers rebates on the purchase of Energy Star® home appliances. Rebates on cooling systems range from \$20-\$425, heating systems from \$100-\$500 and appliances from \$50-\$75. http://www.pge.com/en/myhome/saveenergymoney/rebates/index.page
<ul style="list-style-type: none"> Solar Water Heating 	PG&E's Solar Water Heating program provides incentives up to \$2,719 based on the expected performance of the system. http://www.pge.com/csithermal
<ul style="list-style-type: none"> Federal Renewable Energy Tax Credit 	A taxpayer may claim a credit of 30% of qualified expenditures for a renewable energy system that serves a dwelling unit located in the United States that is owned and used as a residence by the taxpayer. Expenditures include labor costs for on-site preparation, assembly or original system installation, and piping or wiring to interconnect a system to the home. http://energy.gov/savings/residential-renewable-energy-tax-credit
<ul style="list-style-type: none"> California Advanced Homes 	California Advanced Homes™ Program, administered by PG&E and TRC Energy Services, highlights best practices in energy efficiency, green building and sustainability, and offers generous financial incentives to help builders and architects create environmentally friendly, energy-efficient communities for potential home buyers. http://www.californiaadvancedhomes.com/
<ul style="list-style-type: none"> New Solar Homes Partnership (NSHP) 	The NSHP provides financial incentives and other support to home builders, encouraging the construction of new, energy efficient solar homes that save homeowners money on their electric bills and protect the environment. http://www.gosolarcalifornia.org/about/nshp.php

Table E-2: Existing Targeted Residential Energy Efficiency Programs

ENERGY EFFICIENCY PROGRAMS	DESCRIPTION
<ul style="list-style-type: none"> Home Energy Assistance Program (HEAP) 	<p>HEAP provides financial assistance to income-qualified applicants in the form of an annual utility credit for gas, electric, propane or firewood to help with the high costs of heating and/or cooling. HEAP programs in Sutter Creek are administered by Amador Tuolumne Community Action Agency (ATCAA). http://atcaa.org/atcaa-programs/energyweatherization/</p>
<ul style="list-style-type: none"> Emergency Crisis Intervention Program (ECIP) 	<p>ECIP provides financial assistance in the event of a crisis, such as a 48-hour shut-off notice. ECIP programs in Sutter Creek are administered by Amador Tuolumne Community Action Agency (ATCAA). http://atcaa.org/atcaa-programs/energyweatherization/</p>
<ul style="list-style-type: none"> Weatherization Assistance Program (WAP) 	<p>WAP provides free weatherization services and products to improve a home's energy efficiency and reduce overall utility costs, including attic insulation, weather stripping, caulking, minor home repairs and related conservation measures. WAP programs in Sutter Creek are administered by Amador Tuolumne Community Action Agency (ATCAA). http://atcaa.org/atcaa-programs/energyweatherization/</p>
<ul style="list-style-type: none"> Relief for Energy Assistance through Community Help (REACH) 	<p>REACH provides grants for projects that reduce energy vulnerability such as PG&E's one-time emergency financial assistance. http://www.pge.com/reach/</p>
<ul style="list-style-type: none"> California Alternate Rates for Energy (CARE) 	<p>Qualified low-income customers that are enrolled in the CARE program receive a 30-35 percent discount on their electric and natural gas bills. CARE is administered by PG&E. http://www.pge.com/care/</p>
<ul style="list-style-type: none"> Family Electric Rate Assistance (FERA) 	<p>The FERA program provides a monthly discount on electric bills for income-qualified households of three or more persons. FERA is administered by PG&E. http://www.pge.com/fera</p>
<ul style="list-style-type: none"> Energy Savings Assistance Program 	<p>The Energy Savings Assistance Program provides income-qualified customers with energy-saving improvements at no charge. The program is administered by PG&E. http://www.pge.com/en/myhome/saveenergymoney/financialassistance/energysavingsassistanceprogram/index.page</p>
<ul style="list-style-type: none"> Medical Baseline Allowance 	<p>Residential customers with a qualified physician certified medical condition can receive additional quantities of energy at the lowest (baseline) price. The program is administered by PG&E. http://www.pge.com/medicalbaseline</p>
<ul style="list-style-type: none"> Multi-Family 	<p>PG&E's Multi-Family Program is for property owners and managers of existing residential dwellings or mobile home parks with five or more units. The program encourages owners to install qualifying energy-efficient products in individual tenant units and common areas of residential apartments, mobile home parks and condominium complexes. A full list of available rebates and incentives is available online. http://www.pge.com/multifamily/</p>
<ul style="list-style-type: none"> Single Family Affordable Solar Housing (SASH) 	<p>The California Solar Initiative SASH program provides qualifying low-income homeowners up-front rebates to defray the costs of installing a solar electric system. Depending on the income level, homeowners may be eligible for an entirely free system, or a highly subsidized one. The SASH program is administered by GRID Alternatives. http://www.gridalternatives.org/learn/sash</p>

Table E-3: Existing Non-Residential Energy Efficiency Programs

ENERGY EFFICIENCY PROGRAMS	DESCRIPTION
<ul style="list-style-type: none"> PG&E Rebates and Incentives 	<p>PG&E offers non-residential customers rebates and incentives for power management software, occupancy sensors on lights, steam traps, HVAC motors and pumps, electric water heaters, process cooling, data center airflow management, boiler economizers, refrigeration, boiler heat recovery, refrigeration control, VSD pumps, boilers and fans. A full list of current rebates can be found using the PG&E money back tool. www.pge.com/businessrebates</p>
<ul style="list-style-type: none"> HVAC Quality Maintenance Program 	<p>PG&E's Commercial HVAC Quality Maintenance Program offers generous incentives for enrolling in a three-year air conditioning quality maintenance service agreement and installing optional unit retrofits. The business owner will lower their operating, repair and replacement costs; optimize unit performance and efficiency; improve the indoor air quality and thermal comfort for employees and customers; help prevent HVAC unit failures that can threaten business operations; and reduce their carbon footprint. http://www.commercialhvacqm.com/</p>
<ul style="list-style-type: none"> Lighting Rebates 	<p>PG&E offers rebates for high-efficient replacement lights as well as rebates to help cover the costs of qualifying fixtures and retrofit kits. http://www.pge.com/en/mybusiness/save/rebates/lighting/index.page</p>
<ul style="list-style-type: none"> Federal Business Energy Investment Tax Credit 	<p>A taxpayer may claim an investment tax credit of 30% of qualified expenditures for solar, fuel cells, small wind systems or 10% of qualified expenditures for geothermal, microturbines and combined heat and power systems (CHP), aka co-generation systems. Expenditures include labor costs for on-site preparation, assembly or original system installation, and for piping or wiring to interconnect a system. http://energy.gov/savings/business-energy-investment-tax-credit-itc</p>
<ul style="list-style-type: none"> Savings By Design (SBD) 	<p>SBD is a statewide program offered by PG&E to encourage high-performance new building design and construction for commercial buildings. The program offers building owners and their design teams a wide range of services, such as design assistance, design team incentives, owner incentives, and educational resources. www.pge.com/savingsbydesign</p>
<ul style="list-style-type: none"> Retrocommissioning (RCx) Program 	<p>Retrocommissioning (RCx) is a systematic process for identifying less-than-optimal performance in your facility's equipment, lighting and control systems and making the necessary adjustments. While retrofitting involves replacing outdated equipment, RCx focuses on improving the efficiency of what's already in place. PG&E's RCx Program provides incentives and connects businesses with experts to make sure their facilities — and the equipment and systems within them — are running in peak condition for optimal energy savings. RCx projects can improve a facility's work environment and extend the service life of equipment. http://www.pge.com/en/mybusiness/save/rebates/retrocommissioning/index.page</p>
<ul style="list-style-type: none"> Lodging Savers 	<p>LodgingSavers provides money saving energy-efficiency retrofits to hoteliers to update lighting, install guestroom energy management systems, replace packaged terminal air conditioners (PTACs), and install new showerheads, faucet aerators and pool pumps. http://www.lodgingsavers.org/</p>
<ul style="list-style-type: none"> Bright Schools 	<p>Provides technical assistance to schools for improving building energy efficiency and clean energy generation. Up to \$20,000 available to successful applicants to fund professionally-prepared feasibility study for the most effective energy efficiency measures. http://www.energy.ca.gov/efficiency/brightschoools/</p>

ENERGY EFFICIENCY PROGRAMS	DESCRIPTION
<ul style="list-style-type: none"> Prop 39: California Clean Energy Jobs Act 	<p>The California Clean Energy Jobs Act (Prop. 39) changed the corporate income tax code and allocates projected revenue to California's General Fund and the Clean Energy Job Creation Fund for five fiscal years, beginning with fiscal year 2013-14. Under the initiative, roughly up to \$550 million annually is available for appropriation by the Legislature for eligible projects to improve energy efficiency and expand clean energy generation in schools.</p> <p>http://www.energy.ca.gov/efficiency/proposition39/index.html</p>
<ul style="list-style-type: none"> Energy Partnership Program 	<p>The California Energy Commission (CEC) Provides up to \$20,000 in no cost technical assistance to public agencies in identifying the most cost effective energy efficient upgrades. http://www.energy.ca.gov/efficiency/partnership/</p>
<ul style="list-style-type: none"> Energy Efficiency Financing 	<p>The California Energy Commission (CEC) provides 0-1% interest loans to public entities for projects with proven energy savings. http://www.energy.ca.gov/efficiency/financing/index.html</p>
<ul style="list-style-type: none"> Water Energy Technology 	<p>The California Energy Commission (CEC) will implement a Water Energy Technology (WET) program to provide funding for innovative technologies that meet the following criteria: 1) Display significant water savings, energy savings, and greenhouse gas emission reductions. 2) Demonstrate actual operation beyond the research and development stage. 3) Document readiness for rapid, large-scale deployment (but not yet widely deployed) in California.</p> <p>http://www.energy.ca.gov/wet/</p>
<ul style="list-style-type: none"> Water Energy Grant Program 	<p>This program funds residential, commercial and municipal water efficiency projects that reduce GHG emissions and reduce water and energy use. Eligible applicants include local agencies, JPA's, and non-profits. Eligible projects include residential and commercial water efficiency, municipal water efficiency programs, or projects that reduce greenhouse gas, reduce water and reduce energy use. Available funding is \$19 million. The program is funded through the Cap and Trade legislation (specifically SB 103, Sec.11) and administered by California Department of Water Resources. http://www.water.ca.gov/waterenergygrant/</p>
<ul style="list-style-type: none"> Streetlight Upgrade Program 	<p>PG&E will be replacing its non-decorative streetlights. In collaboration with the cities and counties across its service territory, PG&E will replace 160,000 existing high pressure sodium vapor (HPSV) bulbs with longer-lasting and more efficient light-emitting diode (LED) fixtures over the next three years. Cities and Counties can opt in for early upgrade by visiting: http://www.pge.com/streetlightupgrade</p>

APPENDIX F: ENERGY EFFICIENCY FINANCING PROGRAMS

This appendix lists available financing programs for specific sectors (community-wide, residential, non-residential and municipal).

Table F-1: Community-Wide Energy Efficiency Financing Programs

FUNDING SOURCE	DESCRIPTION
<ul style="list-style-type: none"> PROPERTY ASSESSED CLEAN ENERGY (PACE) 	<p>PACE is a means of financing energy-efficiency upgrades, water-efficiency upgrades or renewable energy fixtures on existing structures with little or no up-front costs. With PACE, residential and commercial property owners living within a participating district can finance up to 100% of their project and pay it back over time as a voluntary property tax assessment through their existing property tax bill. Loans are typically paid out over an assigned term of 15-20 years, keeping monthly payments low enough that utility savings may exceed the payment amount, generating a net-positive cash flow. It can also be used to finance leases and power-purchasing agreements (PPA's) for solar power or other renewable energy providers. http://energycenter.org/policy/property-assessed-clean-energy-pace</p>
<ul style="list-style-type: none"> Solar Power Purchase Agreement (PPA) 	<p>A solar power purchase agreement (PPA) is a financial agreement where a developer arranges for the design, permitting, financing and installation of a solar energy system on a customer's property at little to no cost. The developer sells energy to the host customer at a fixed rate that is typically lower than the local utility's retail rate. The lower price offsets the purchase of grid electricity while the developer receives the income from these sales of electricity as well as any tax credits and other incentives generated from the system.</p>

Table F-2: Residential Energy Efficiency Financing Programs

FUNDING SOURCE	DESCRIPTION
<ul style="list-style-type: none"> Energy Star Energy Efficiency Mortgages 	<p>An Energy Efficient Mortgage (EEM) is a mortgage that credits a home's energy efficiency in the mortgage itself. EEMs give borrowers the opportunity to finance cost-effective, energy-saving measures as part of a single mortgage and stretch debt-to-income qualifying ratios on loans thereby allowing borrowers to qualify for a larger loan amount and a better, more energy-efficient home. https://www.energystar.gov/index.cfm?c=mortgages.energy_efficient_mortgages</p>
<ul style="list-style-type: none"> GSFA Residential Energy Retrofit Program 	<p>Through the Golden State Finance Authority (GSFA) Residential Energy Retrofit Program, eligible homeowners can finance energy efficiency and renewable energy measures, up to \$50,000, with a 6.5% fixed interest rate 15-year loan. 100% financing is available with no income limits or equity requirements. http://www.gsfa.org/programs/energy/overview.shtml</p>

Table F-3: Non-Residential Energy Efficiency Financing Programs

FUNDING SOURCE	DESCRIPTION
<ul style="list-style-type: none"> PG&E Energy Efficiency Financing 	<p>PG&E offers 0% interest loans of up to \$100,000. Loans can be used to replace old and inefficient equipment with no up-front out-of-pocket investment. The program allows 5 years for repayment; however, the energy savings continue to accrue after the loan is paid off.</p> <p>http://www.pge.com/en/mybusiness/save/rebates/onbill/index.page</p>
<ul style="list-style-type: none"> Energy Savings Agreement 	<p>An Energy Savings Agreement involves a financing contract with a private energy services company that packages energy efficiency as a service paid through the energy savings. It allows for 100% financing and is off balance sheet.</p>
<ul style="list-style-type: none"> SAFE-BIDCO 	<p>SAFE-BIDCO offers small businesses, qualifying landlords, and non-profit organizations loans up to \$450,000 for a maximum of 15 years to complete energy efficiency and renewable energy projects. The loan can cover energy studies, design and consultant fees, materials and equipment costs and loan fees. http://www.safe-bidco.com/loan-programs/energy-efficiency-loans/</p>

Table F-4: Municipal Energy Efficiency Financing Programs

FUNDING SOURCE	DESCRIPTION
<ul style="list-style-type: none"> CEC Energy Efficiency Financing 	<p>The California Energy Commission (CEC) offers school districts, charter schools, county offices of education, state special schools, community college districts 0% loans for energy efficiency and energy generation projects. CEC offers cities, counties, special districts, public colleges, universities and public care institutions/hospitals 1% loans for energy efficiency and energy generation projects. http://www.energy.ca.gov/efficiency/financing/</p>
<ul style="list-style-type: none"> PG&E Energy Efficiency Financing 	<p>PG&E offers 0% interest loans of up to \$250,000. Loans can be used to replace old and inefficient equipment with no up-front out-of-pocket investment. The program allows 10 years for repayment; however, the energy savings continue to accrue after the loan is paid off.</p> <p>http://www.pge.com/en/mybusiness/save/rebates/onbill/index.page</p>
<ul style="list-style-type: none"> Energy Savings Agreement 	<p>An Energy Savings Agreement involves a financing contract with a private energy services company that packages energy efficiency as a service that is paid through the energy savings. It allows for 100% financing and is off balance sheet.</p>
<ul style="list-style-type: none"> CSCDA Sustainable Energy Bond Program 	<p>California Statewide Communities Development Authority (CSCDA) and the Foundation for Renewable Energy and Environment are teaming together to provide public agencies and nonprofit organizations throughout California with access to tax exempt financing for critical sustainable energy investments. Under the Sustainable Energy Bond Program, participating entities and organizations will contract with an Energy Service Company (ESCO) to complete energy and water conservation measures. Improvements could include street lighting, building lighting, pumps, HVAC, system controls, boilers, chillers, ducting, windows, partial roofing, toilets and others. The program participants will receive substantial utility cost savings, including a contractual guarantee sufficient to cover the full cost of all retrofit work. All projects are financed through tax exempt bonds. http://cscda.org/Public-Agency-Programs/Sustainable-Energy-Bond-Program</p>

FUNDING SOURCE	DESCRIPTION
<ul style="list-style-type: none"> ▪ IBank Clean Energy Finance Center 	<p>The California Infrastructure and Economic Development Bank (IBank) Clean Energy Finance Center (CEFC) encourages concerted public and private investments and utilizes IBank's access to capital markets for selected clean energy and energy efficiency projects. The IBank CEFC will help to drive energy related projects for State and local governments.</p> <p>http://ibank.ca.gov/clean_energy.htm</p>

PUBLIC DRAFT

APPENDIX G: PUBLIC OUTREACH

During the development of the Energy Action Plan (EAP), public outreach was a key part of the process. To this effort, one publicly noticed study session was hosted by the Planning Commission on June 22nd, 2015 and an online survey was released to collect public input on the EAP and proposed Goals, Strategies and Actions. In addition there were ___ public hearings on the EAP – ___ before the Planning Commission ____, 2015 and ___ before the Board of Supervisors on ____, 2015. The Board approved the EAP __-__ (absent) on ____, 2015. A variety of methods were used to ‘spread the word’ about the study sessions and survey including targeted social media posts through the local Sierra Business Council network, multiple email blasts to local contacts, public notices in the local newspaper, and invitations to other local organizations and businesses. The public input study session was conducted at the Sutter Creek Planning Commission meeting on June 22nd, 2015. A summary of the public input is described below.

Study Session: June 22nd, 2015

The study session summarized work performed by Sierra Business Council (SBC) for Sutter Creek in 2010 – 2015. The work included an inventory of energy usage community-wide and by municipal operations for a baseline year of 2005, and a forecast of future energy usage up to year 2020. A series of charts and graphic displays were provided as well as handout materials summarizing the work completed to date.

Turnout was roughly 5 community members, and a number of excellent comments were made that helped inform the next phase of the process – development of the goals, strategies, and actions. A summary of the key comments is provided below.

Table G-1: Comments from Study Session: June 22, 2015

Topic	Comment
Goal #1 <i>Increase Energy Efficiency in Existing Structures</i>	<ul style="list-style-type: none"> - Provide information on incentive programs - Assess buildings and establish baselines for measurable results
Goal #2 <i>Increase Energy Performance of New Construction</i>	<ul style="list-style-type: none"> - Provide information on energy efficient thermostats for new construction
Goal #3 <i>Increase Renewable Energy Use</i>	<ul style="list-style-type: none"> - Explore solar orientation for the City - Maintain incentives for solar
Goal #4 <i>Increase Energy Efficiency in</i>	<ul style="list-style-type: none"> - Look into the solar potential at the sewer plant - Explore limitations of working with parks and historic structures - Explore benefits of using smart thermostats and other energy efficiency upgrades for municipal buildings

Municipal Structures and Operations	
Goal #5 Increase Community Water Conservation & Efficiency to Reduce Related Water Use	<ul style="list-style-type: none"> - Have landscaping and zero-scaping example gardens - Use City's landscape as an example of water conservation - Look into efficiencies at sewer plant
General Comments	<ul style="list-style-type: none"> - Identify qualifications and emphasize incentives available for the community - Address ways in which the retirement and renter community can engage in these programs

Online Survey - Activated May 29th, 2015 - Closed July 20th, 2015

In an effort to expand outreach to local residents and businesses, Sierra Business Council developed an on-line survey to garner input on the proposed goals, strategies, and actions. A series of questions about the goals, strategies, and focus of the plan were asked and respondents were provided multiple choices for an answer plus an opportunity to provide additional written comments. A summary of the survey responses follows.

Table G-2: Online Survey Summary for Sutter Creek

Survey Questions	Responses
Respondent Profile	<ul style="list-style-type: none"> ▪ 69 total responses ▪ 96% from City residents ▪ 71% were 55 or older
Should the City promote energy efficiency in the five focus areas?	- 87% Yes
Are there other areas the EAP should focus on?	- 51% Not Sure
Do the 5 goals effectively address the 5 focus areas?	85% Yes Comments: - Include an element of cost-effectiveness
Should there be other goals?	66% Not Sure Comments: - Agricultural land energy use and water consumption - Improved public transportation
Do the strategies effectively implement the goals?	- 82% Yes
Are there other strategies that should be added?	- 64% Not Sure
Do the actions effectively implement the strategies?	- 77% Yes
Are there actions that should be added?	75% Not Sure; 17% No Comments: - Involve schools in energy and water conservation demonstrations
What information do you need to decide to undertake energy efficiency	89% Average costs 52% Case studies

Survey Questions	Responses
measures in your home or business?	52% Quotes from contractors Comments: <ul style="list-style-type: none"> - Info on rebates, retrofit/incentive programs, etc. - Projected cost savings and payback period/return on investment
What is the best way to access the information?	<u>Top 3:</u> 70% City website 45% Mailers 45% Pacific Gas and Electric Company Comments: <ul style="list-style-type: none"> - Local newspaper / print
Should anything be added/deleted to the Goals, Strategies, Actions?	<ul style="list-style-type: none"> - Language ensuring those who cannot afford upgrades are not penalized; rather, offered assistance
Additional comments:	<ul style="list-style-type: none"> ▪ City should lead by example in these efficiency and conservation areas ▪ Employ effective campaigning to get the word out about programs to the community Showcase local businesses that provide energy efficiency services